INDEX OF AUTHORS' NAMES.

TRANSACTIONS AND ABSTRACTS.

1921.

(Marked T., and A., i and A., ii respectively.)

A.

Aanensen, D. See Fritz Foerster.

Abderhalden, Emil, and Andor Fodor, researches on fermentation. VII. The influence of additions (toluene, chloroform, thymol, and also of neutral salts) on the fermentative decomposition of dipeptides by yeast extract, A., i, 481. relationship between adsorption and

the dissolved condition. I. Adsorption of amino-acids, polypeptides, and egg-albumin by animal charcoal, A., ii, 21.

Abderhalden, Emil, and Hans Handovsky, the influence of the structure and configuration of substrates (polypeptides) on ferment action, A., i, 547.

Abderhalden, Emil, and H. Kürten, the cleavage, by ferments, of polypeptides containing amino-acids which have not yet been found as cleavage products of proteins, A., i, 547.

Abderhalden, Emil, and Arthur Weil,

action of lipase, A., i, 68.

Abel, Emil, catalytic studies. VII. Catalysis of hydrogen peroxide by

iodine ions, A., ii, 35.
kinetics of the reaction between hydrogen peroxide and iodine, A., ii, 180.

the influencing of catalysts and specifically active catalysts, A., ii, 542.

Abelmann, Arthur, the action of mag-nesium methyl iodide on mercuriated aromatic ketones and on mercuric chloride, A., i, 629.

mercurometric estimation of oxalic acid, A., ii, 419.

Abernethy, C. L. See William Edward Garner.

Abney, (Sir) William de Wiveleslie, obituary notice of, T., 529.

CXX. ii.

Aboulenc, Jean. See Jean Baptiste Senderens.

Acel, Desider, the oligodynamic action of metals, A., i, 147.

Achard, Ch., and E. Feuillié, detection of albumoses in blood plasma, serous solutions, and exudates, A., i, 380. albumoses of the cells and tissues, A., i, 380.

Ackermann, Adolf, microscopic forms of iron rust, A., ii, 511.

Ackermann, Dankwart, mytilitol, a

naturally occurring cyclose, A., i, 764. Ackermann, Dankwart, and Friedrich Kutscher, some methylated amino-acids and aporrhegmata, and their behaviour in the animal body, A., i,

Acton, Hugh William, and Harold King. nephelometric estimation of quinine in blood, A., i, 474.

Adam, A., influence of fever on the phosphoric acid content of [rabbit's]

muscle, A., i, 529.

Adam, Neil Kensington, properties and molecular structure of thin films of palmitic acid on water. I., A., ii, 488.

Adams, E. P., statistical mechanics and chemistry, A., ii, 628.

Adams, Elliot Quincy, the independent origin of actinium, A., ii, 8.

Adams, Elliot Quincy, and Herbert L. Haller, isocyanine dyes from 4methylquinoline and its homologues, A., i, 53.

kryptocyanines; a new series of photo-sensitising dyes, A., i, 129.

Adams, Elliot Quincy. See also Louis A. Mikeska.

Adams, Leason H., and Erskine D. Williamson, some physical constants of BB' dichlorodiethyl sulphide, A., i, 494.

Adams, Roger, H. B. Bramlet, and F. H. Tendick, the action of the Grignard reagent on thiocyanates, A., i, 5.

Adams, Roger, and Charles Shattuck Palmer, the reactions of the arsines; condensation of primary arsines with aldehydes, A., i, 70.

Adams, Roger, and E. H. Vollweiler, [preparation of] allyl p-aminobenzoate, A., i, 416.

Adams, Roger. See also H. E. French and L. H. Ulich.

Adkins, Homer. See Leone Oyster.

Adler, Erich, influence of external temperature on the lactacidogen content of frog's muscle. I. and II., A., i, 529.

influence of the season of the year on the lactacidogen content of frog's

muscle, A., i, 529.

Adler, Erich, and L. Günzburg, influence of external temperature on the lactacidogen content of frog's muscle. I. and II., A., i, 529.

Adler, Erich, and Salo Isaac, influence of phosphorus poisoning on the lactacidogen content of frog's muscle, A., i, 529.

Adler, Erich. See also Gustav Embden. Adolf, Mona, and Wolfgang Pauli, physico-chemical analysis of zirconium oxychlorides and zirconium oxide sols, A., ii, 700.

Adriano, Felipe T., volumetric method for the estimation of lactose by alkaline potassium permanganate, A., ii, 284.

Aguirreche, Fernando Diáz. See Antonio Madinaveitia.

Ahlberg, R. See J. M. Lovén.

Ajon, Guido, volumetric estimation of potassium and its application to the analysis of fertilisers, A., ii,

Aktien Gesellschaft für Anilinfabrikation, preparation of tetrahydronaphthalene, A., i, 333.

Albrecht, Eleonore, branching relationship for Ra-C, Ac-C, Th- \tilde{C} , and the disintegration constant of the C" products, A., ii, 675.

Aldinger, R. See Otto Fischer.

Aldous, Wilfrid Major. Se

See Nevil Vincent Sidgwick.

Alessandri, Luigi, certain nitronic derivatives, A., i, 570.

action of nitroso-derivatives on un-

saturated compounds, A., i, 730. **Alessandri**, Luigi, and M. Passerini, formyl and aldehydic derivatives of pyrroles and indoles, A., i, 592.

Alexander, Jerome, the zone of maximum colloidality; its relation to viscosity in hydrophile colloids, especially karaya gum and gelatin, A., ii, 310.

Alimchandani, Rupchand Lilaram, and Andrew Norman Meldrum, derivatives of gallic acid. II. Gallic acid (and the cresotic acids) and chloral, T., 201.

Allmand, Arthur John. See Hubert Thomas Stanley Britton.

Allpress, Charles Frederick. See Frederick Challenger.

Alsberg, Carl Lucas. See Harold E.

Woodward.

Alstine, Ernest van, the determination of hydrogen-ion concentration by the colorimetric method and an apparatus for rapid and accurate work, A., i, 214. Amano, Umetarô. See Heisaburô Kondô.

Ambard, L., arrest of glycolysis [in blood] by a mixture of sodium fluoride and monopotassium phosphate, A., i, 204.

amylase; its estimation and the mechanism of its action, A., i,

modifications of Bertrand's method for estimating very small quantities of sugar, A., ii, 220.

estimation of urea by sodium hypobromite, A., ii, 224.

Amberger, Conrad, and Karl Bromig, glycerides of goose fat, A., i, 833.

Ambler, Joseph Alfred, naphthalenesulphonicacids. I. Sparingly soluble salts of certain naphthalenesulphonic acids, A., i, 21.

naphthalenesulphonic acids. Alternative method for the detection of naphthalene-2:7- and -1:6-disulphonic acids, A., ii, 136.

Ambler, Joseph Alfred, and Edgar Theodore Wherry, naphthalenesulphonic acids. II. Detection of certain naphthalenesulphonic acids, A., ii, 68.

Aminoff, G., and R. Mauzelius, armangite, a new arsenite from Langban, Sweden, A., ii, 269.

Anderegg, Frederick Osband. See Arthur B. Ray.

Anderson, R. J., composition of inositolphosphoric acid of plants. A., i, 152.

Anderson, R. J. [with W. L. Kulp], acerin: the globulin of the maple seed, A., i, 821.

Andersson, Hugo. See Sven Odén. Andô, Kinji. See Yakichi Ôsaka.

Andoyer, G., determination of watering

and creaming in samples of altered milk, A., ii, 662.

Andoyer, G., apparatus for technical gas analysis, A., ii, 704.

André, Emile, the determination of the acetyl value of fatty substances, A., ii, 419.

Andress, Karl. See Ernst Berl.

Andrews, (Miss) Alberta Catherine Pritchard. See John Read.

Angeletti, A., use of cupferron [ammonium salt of nitrosophenylhydroxylamine] in the separation of zirconium from uranium, A., ii, 524.

Angeletti, A. See also Michele Giua. Angeli, Angelo, relations between azoxyderivatives and diazo-compounds, A., i,

Angeli, Angelo, and Antonio Pieroni, melanins, A., i, 626.

Angelico, Francesco, transformations of salicylic acid in the animal organism, A., i, 701.

Angelis, Maria de, crystalline form of trimethylphloretin, A., i, 731.

Anger, Gerda. See Hermann O. L. Fischer. Angerer, E. von, photoelectric photometry of the luminosity of active nitrogen, A., ii, 257.

Annett, Harold Edward, factors influencing alkaloidal content and yield of latex in the opium poppy (Papaver somniferum), A., i, 87.

Karl von Anschütz, Ludwig. See Auwers.

Anschütz, Richard, and Alfred Hilbert, action of nitric acid on aa-diphenylethane and aa-diphenylethylene, A., i, 783.

Anselm, Franz. See Kurt Hess.

Anthes, E. See Hermann Staudinger. Antropost, A. von, is the existence of atoms and molecules demonstrated? A., ii, 101.

Aoyama, Shinjirô. See YoshiharuMurayama.

Apolit, (Mile.) Jeanne, the dehydration of a-phenyl-BB-dimethylbutan-a-oland of $\alpha \gamma$ -diphenyl- $\beta \beta$ -dimethylpropan- α -ol, A., i, 564.

See Fortunato Consonno. Apostolo, C. Arakatsu, Bunsaku, and Mitsuharu Fukuda, the limiting size of colloidal particles in a Brownian motion, A., ii, 175.

Araus, J. See Siegmund Reich. Ardely, Et. See Marc Tiffeneau.

Ariano, R., estimation of phosphorus in steels; separation of the phosphorus from the other components of the steel, A., ii, 347.

deduction of the laws of chemical statics from the theorem of virtual work, A., ii, 580.

Ariès, E., the heat of vaporisation of a liquid at low temperatures, A., ii, 17. Arkel, A. E. van. See Hugo Rudolph

Kruyt.

Armstrong, Edward Frankland, and Thomas Percy Hilditch, catalytic actions at solid surfaces. VI. Surface area and specific nature of a catalyst; two independent factors controlling the resultant activity, A., ii, 582.

Arnd, Th., estimation of nitrogen in nitrates and nitrites by means of copper-magnesium alloy, A., ii, 58.

Arndt, Fritz [with E. Milde and G. Eckert], preparation of methyl mer-

captan, A., i, 842.

Arndt, Fritz, and E. Milde, ring closure with hydrazinedicarbonamides containing sulphur. I. Dithiourazole and iminothiourazole, A., i, 813.

Arnold, R. See Marc Bridel.

Hans, and Richard Aron, accessory food factors. I. nutrition values of different fats, A., i, 475.

Aronheim, Gertrud, explanation of the electrical phenomena during the decomposition of ammonium amalgam, A., ii, 296.

Aronowsky, Alexander. See HansPringsheim.

Arreguine, Victor, the sugar of the fruit of Phytolacca dioica, Linn., A., i. 487.

determination of the boiling point of very small quantities of substances, A., ii, 240.

Arreguine, Victor, and Eduardo D. García, preparation of triaryl and trialkyl derivatives of iodine, A., i, 534.

a colour reaction for carbamide, A., ii, 605.

Arrhenius, Olof, new methods for the estimation of potassium and ammonium, A., ii, 412.

Arrhenius, Svante. See Johanne Christiansen.

Artmann, Paul, detection of mercury as cuprous mercuric iodide, A., ii, 350.

Arzberger, C. F., W. H. Peterson, and Edwin Broun Fred, certain factors that influence the production of acetone by Bacillus acetoethylicum, A., i, 80.

Asahina, Yasuhiko, and Atsushi Fujita, anemonin derivatives, A., i, 798.

Asahina, Yasuhiko, and S. Mayeda, evodiamine and rutaecarpine, A., i, 48. Asahina, Yasuhiko, and Seizô Motigase,

the alkaloids of Japanese Corydalis bulb, A., i, 86.

Asahina, Yasuhiko, and Seisi Takagi, volatile oil of Artemisia annua, I II. The constitution of artemisia ketone, A., i, 9.

Ossian, new components of Aschan, colophony, the colophenic acids and their analogues, A., i, 512.

pinabietic acid, a definite resin acid. I. Isolation and purification, A., i, 669.

tert .- pinene hydrochloride; the pina-

colin transformation, A., i, 795.

Aschan, Ossian, and K. E. Ekholm, pinabietic acid, a definite resin acid. Molecular weight and rotatory power, A., i, 669.

Aston, Francis William, mass-spectra and atomic weights, T., 677.

mass spectra of chemical elements. III., A., ii, 474.

mass spectra of the alkali metals, A., ii, 565.

Atack, Frederick William, the structural isomerism of the oximes. Criticism of the Hantzsch-Werner hypothesis and a new theory of the constitution of isomeric oximes, T., 1175.

Atack, Frederick William, and George William Clough, preparation of compounds of the anthraquinone series, Ā., i, 870.

Atack, Frederick William, and Leonard Whinyates, the structural isomerism of the oximes. II. A fourth benzildioxime, T., 1184.

Atchley, Dana W. See Walter W. Palmer.

Aten, Adriaan Hendrik Willem, the determination of conductivity electrolytes by means of an alternating current galvanometer, A., ii, 159.

Aten, Adriaan Hendrik Willem, and (Mlle.) Louise M. Boerlage, the crystallisation of metals by electrical precipitation and certain connected phenomena, A., ii, 81.

Atkins, William Ringrose Gelston. See Alexander Pringle Jameson.

Atkinson, Harold, estimation of potassium in the presence of sodium, magnesium, sulphates, and phosphates, A., ii, 654.

Aubel, E., oxidation of glycerol by Bacillus subtilis, A., i, 641.

Aubel, E. See also Léon Blum.

Aubel, Edmond van, influence of temperature on the viscosity of normal liquids, A., ii, 575.

Audubert, René, the mechanism of the exchanges of energy in vaporisation, A., ii, 240.

Audubert, René, the mechanism of the exchange of energy in the electrochemical passage of an atom to the ionic state, A., ii, 297.

the elementary quantity of energy brought into action in solution, A.,

ii, 303.

Auerbach, Rudolf, polychroism of colloidal sulphur, A., ii, 40.
coagulation and solution of silver

bromide sols by ammonia, A., ii, 312.

substantive cotton dyeing, A., ii, 680.

Auger, Victor, double catalysis of vanadic acid and hydrogen peroxide, A., ii, 457.

the equilibria of ter-, quadri-, and quinque-valent vanadium in solution in concentrated sulphuric acid, A., ii, 554.

Auger, Victor, and (Mlle.) M. Vary, sulphonations in the presence of iodine, A., i, 667.

Aurén, Tycho E:son, the absorption of X-rays, A., ii, 367.

scattering and absorption of hard X-rays in the lightest elements, A., ii, 367.

Auslaender, Fedora. See Ernst Philippi.

Austin, J. Harold, and Donald D. van Slyke, the estimation of chlorides in blood plasma, A., ii, 272.

Austin, J. Harold, Edgar Stillman, and Donald D. van Slyke, factors governing the rate of excretion of urea, A., i, 383.

Auwers, Karl von, formation and autoxidation of coumaranones, A., i, 118.

the action of semicarbazide on unsaturated ketones, A., i, 466.

effects of ring closure on spectrochemical properties. II. Unsaturated heterocyclic compounds, A., ii, 73.

KarlAuwers, von, and Ludwig Anschütz, formation of flavones and benzylidenecoumaranones from hydroxyphenyl styryl ketone dibromides, A., i, 682.

Auwers, Karl von, E. Borsche, and R. Weller, the oxidation of meta-substituted o-aminophenols, A., i, 571.

Auwers, Karl von, and Adelheid Frühling, spectro-chemistry of benzene

derivatives, A., ii, 229. spectro-chemistry of polynuclear aromatic compounds and constitution of naphthalene, A., ii, 230.

Auwers, Karl von, and Elisabeth Lämmerhirt, phenylhydrazine derivatives of unsaturated fatty-aromatic ketones and the products of their transformation, A., i, 464.

Auwers, Karl von, and W. Schaich, N-alkyl derivatives and N-carboxylic

esters of indazole, A., i, 806.

Auwers, Karl von, and E. Schmellenkamp, the relationship between configuration and physical properties of the esters of halogenated cinnamic acids, A., i, 417.

Auwers, Karl von, and W. Thies, 3oxythionaphthens [2-keto-1:2-dihydrothionaphthens], A., i, 120. Auwers, Karl von, and K. Ziegler, 1:5-

dimethyl-1-dichloromethyl- $\Delta^{3:5}$ -cyclohexadien-2-one, A., i, 114.

Auwers, O. von, magnetism and atomic structure, A., ii, 484.

В.

Babe, E., and T. Cabrera, a new indicator reagent for acids and alkalis, A., ii, 55.

Babini, J., graphical methods (nomograms) for chemical calculations, A., ii, 395.

Baborovský, Jiri, and V. Hanáková, hydration of the lithium cation, A., ii, 573.

Bach, Alexis, and B. Sbarsky, estimation of the products of degradation of the protein substances in blood serum, A., ii, 71.

Bach, E. See Peter Rona.

Bachem, Albert. See Leonhard Grebe. Back, S. See Thomas Featherstone

Harvey.

Backer, Hilmar Johannes, the action of a-sulphopropionic acid on some aromatic mono-and di-amines, A., i, 855.

Backer, Hilmar Johannes, and J. V. Dubsky, modified method for the preparation of a-sulphocarboxylic acids, A., i, 9.

Backer, Hilmar Johannes. See also Antoine Paul Nicholas Franchimont.

Backes, John Valentine, Ralph Winton West, and (Miss) Martha Annie Whiteley, quantitative reduction by hydriodic acid of halogenated malonyl derivatives. I. The amides and s.-di-alkyl- and -aryl-substituted amides of mono- and di-bromomalonic acid, T., 359.

Bader, Marcel. See Charles Sunder. Bader, Walter. See British Cellulose and Chemical Mfg. Co., Ltd.

Badische Anilin- & Soda-Fabrik, preparation of nitrogenous condensation products of the anthraquinone series, A., i, 274, 350.

preparation of carbamide from compounds of ammonia and carbon dioxide, A., i, 319.

preparation of nitrogenous derivatives

of anthracene, A., i, 361. preparation of 3-nitroquinoline and

its derivatives, A., i, 517.

Bäckström, Hans L. J., affinity of the aragonite-calcite transformation, A., ii, 317.

Backeland, L. H. See Mortimer Harvey.

Baerwind, Heinrich. See Hermann O. L. Fischer.

Bagiella, E. See Michele Giua.
Bagster, Lancelot Salisbury, the reaction between nitric acid and copper T., 82.

Bailey, Clyde H. See F. A. Collatz. Bailey, G. C., and Felix Boettner, production of coumarins from maleic and malic acids, A., i, 879.

Bailleux, R. See Henri Wuyts.

Baillon, Léon, synthesis of monobasic or dibasic acids by the action of malonic acid on the substituted benz. hydrols; replacement of the hydroxyl group by the carbomethoxy-group; ·CH₂·CO₂H or the dicarbomethoxygroup; 'CH(CO2H)2, A., i, 249.

Bailly, Octave, the action of epichlorohydrin on disodium hydrogen phosphate in aqueous solution; the stability of a monoglyceromonophosphoric diester, A., i, 299, 493.

the action of bromine on allyl phosphates in aqueous solution, and transformation of mono-allyl-phosphoric acid into a mono-glyceromono-phosphoric ester, A., i, 493.

Bair, W. H., spectra of some compound gases in vacuum tubes, A., ii, 362.

Baker, Julian Levett, and Henry Francis Everard Hulton, amylases of the cereal grains-rye, T., 805.

the iodometric estimation of sugars, A., ii, 417.

iodometric estimation of the diastatic power of malts, A., ii, 420.

Bakr, Abu Mohamed, and Joseph Edgar King, the determination of the sorption of both solvent and solute. I. Preliminary; the system, benzeneiodine-charcoal, T., 454.

Balareff, D., the estimation of phosphor acid as magnesium pyrophosphate. VI., A., ii, 518.

Balareff, D., the arrangement of the molecular volumes of the oxides in the periodic system, A., ii, 575.

detection of pyrophosphoric acid in the presence of orthophosphoric acid and metaphosphoric acid, A., ii, 708.

reaction of manganese, iron, and co-

balt, A., ii, 712.

Baldwin, E. J. See Hamilton P. Cady. Ball, Nigel G. See Henry Horatio Dixon.

Balling, A. See Otto Fischer.

Baly, Edward Charles Cyril, molecular phase hypothesis, a theory of chemical

reactivity, A., ii, 73.

Baly, Edward Charles Cyril, and William Francis Barker, the photochemical reaction between hydrogen and chlorine and its variation with intensity of the light,

Baly, Edward Charles Cyril, Isidor Morris Heilbron, and William Francis Barker, photocatalysis. I. The synthesis of formaldehyde and carbohydrates from carbon dioxide and water, T., 1025.

Balz, Emil Harold. See Alexander Lowy.

See Lothar Wöhler. Balz, O.

Bamberger, Eugen, rearrangement of nitroparaffins, A., i, 218.

transformation of certain aromatic compounds, A., i, 716.

arylhydroxylamines and arylazides; a

comparison, A., i, 716. the behaviour of arylhydroxylamines towards the hydrogen haloid acids, A., i, 723.

Bamberger, Eugen [with (Frl.) Paula Köpcke], nitrosophenylhydroxylamine, nitrosoacetanilides, and "diazoanhydr-

ides," A., i, 134.

Bamberger, Eugen, and A. von Goldberger, arylnitroamines, A., i, 135. Ban, J. See T. Yoneyama. Bansa, August. See Fritz Mayer.

Barbaudy, Jean, the properties of diagrams; curves representative of the displacement of the equilibrium of chemical systems, A., ii, 313. Barendrecht, Hendrik Pieter, the direct

synthesis of carbamide by urease, A., i, 203.

Bargellini, Guido, and C. Moncada, certain substances contained in lichens, A., 1, 865.

Barkan, Georg. See Amandus Hahn. Barker, William Francis. See Edward Charles Cyril Baly.

Barlot, J., a complex combination of thallium and hydrofluoric acid, A., ii, 113.

the displacement of metals in saline solutions, A., ii, 247.

the electrical phenomena accompanying the displacement of metals, A., ii, 297.

Barlot, J., and J. Pernot, combination of halogenated derivatives of mercury and of thallium, A., ii, 552.

Barlot, J. See also (Mlle.) Mouret.

Barnett, Edward de Barry, preparation of chloroacetyl chloride, A., i, 494.

Barnett, Edward de Barry, and James Wilfred Cook, studies in the anthra-

cene series. I., T., 901.

Barnett, W. Leigh, a new method for the production of cellulose acetate, A., i, 164.

action of hydrazines on cellulose acetates, A., i, 308.

action of chloroform on phenylhydrazine, A., i, 692.

chloro-cellulose esters, and the action of chloro-acyl chlorides on cellulose, A., i, 847.

Barr, David P. See John P. Peters.

Barratt, John Oglethorpe Wakelin, action of sodium hydroxide on the coagulation of fibrinogen, A., i, 467.

Barrow, Fred, and Evan Dalton Griffiths, condensation of p-nitrobenzyl chloride with nitroso-compounds; a new mode of formation of N-oximino-ethers, T., 212.

Barrow, Fred. See also Alexander McKenzie.

Bartell, F. E., and O. E. Madison, anomalous osmosis with gold-beaters skin membranes; chloride solutions in the presence of acids and bases, A., ii, 90.

Bartels, Hans, quantitative relationships of the cæsium spectrum, A., ii, 565.

Barthélémy, H. See Émile F. Terroine. Bartlett, Guy, and Irving Langmuir, crystal structures of the ammonium haloids above and below the transition temperatures, A., ii, 261.

Baru, R. See Benjamin Max Margosches. Bassett, Henry, obituary notice of, T., 532.

Bassett, Henry, jun., and Thomas Arthur Simmons, the system, pieric acid-5-phenylacridine, T., 416.

Bassett, Henry, jun. See also Lawson John Hudleston.

Bassi, G. See Gualtiero Poma.

Battegay, Martin, and J. Claudin, dibromoanthraquinones, A., i, 349. dinitroanthraquinones, A., i, 350. diaminoanthraquinones, A., i, 513.

Batuecas, T. See Enrique Moles.

Bau, Arminius, oxalic acid content of young leaves in spring foliage, A., i, 838.

estimation of oxalic acid and oxaluric acid in urine and in fæces, A., ii, 356.

Baudisch, Oskar, the influence of light energy on the so-called exchange or displacement reactions; reduction of alkali nitrite, A., ii, 290.

the peculiar chemical and physical properties of ferrous hydroxide peroxide; reduction of alkali nitrate, A., ii, 337.

Bauer, Hugo, the estimation of mercury in organic compounds, A., ii, 657.

Bauer, Hugo. See also Arthur Binz.
 Bauer, K. Hugo, and Felix Schoder,
 4:7-dihydroxycoumarin, A., i, 353.

Baughman, Walter F., George Samuel Jamieson, and Dirk Hendrik Brauns, otoba butter, A., i, 296.

Baughman, Walter F. See also George Samuel Jamieson.

Baumeister, L., and R. Glocker, action of Röntgen rays on chloroform solutions of iodoform, A., ii, 367.

Baumgarten, Rosa. See P. Karrer. Baur, Emil, depolarisation by light, A., ii, 236.

electrolysis of water and an oxyhydrogen gas element, A., ii, 374. Baur, Emil, and Adolf Rebmann, photo-

lysis of water, A., ii, 288.

Ranriedel G. See Walther Dilthey

Bauriedel, G. See Walther Dilthey. Bausch, Hans. See Robert Schwarz.

Baxter, Gregory Paul, twenty-seventh annual report of the committee on atomic weights; determinations published during 1920, A., ii, 321.

rapid method for determining the density of air, A., ii, 635.

Baxter, Gregory Paul, and James Hallett Hodges, revision of the atomic weight of zinc. II. Electrolytic estimation of zinc in zinc chloride, A., ii, 639.

Baxter, Gregory Paul, and Leon Woodman Parsons, a comparison of the atomic weights of terrestrial and meteoric nickel. I. The reduction of nickelous oxide, A., ii, 338.

Baxter, Gregory Paul, Munro Tani, and Harold Canning Chapin, revision of the atomic weight of lanthanum; analysis of lanthanum chloride, A., ii, 454.

Baxter, Gregory Paul, and Carl Henry Wilson, revision of the atomic weight of cadmium. V. Electrolytic estimation of cadmium in cadmium sulphate, A., ii, 640.

Beans, Hal Truman, and Earle T.
Oakes, determination of the hydrogenion concentration in pure water by a
method for measuring the electromotive force of concentration cells
of high internal resistance, A., ii,
12.

Beardwood, J. P. See A. Whitby.

Bechhold, Heinrich, a capillary phenomenon, A., ii, 22.

Bechhold, Heinrich, L. Dede, and L. Reiner, three phase emulsions, A., ii, 177.

Bechhold, Heinrich, and S. M. Neuschloss, ultrafiltration of lecithin sols, A., i, 705.

Beck, Franz. See Max Bergmann, and Reginald Oliver Herzog.

Beck, K. F. See Leonhard Wacker.

Beck, R. P. See Andreas Smits.

Beckendorf, Alfred. See Karl Freudenberg.

Becker, Ernst. See Karl Gustav Schwalbe.

Becker, K. See Reginald Oliver Herzog. Becker, R., Reginald Oliver Herzog, Willi Jancke, and Michael Polányi, methods for [effecting] the orientation of crystal elements, A., ii, 627.

Beckerath, K. von. See Kasimir Fajans.
Beckley, V. A., the preparation and fractionation of humic acid, A., i, 227.

the formation of humus, A., i, 227.

Beckmann, Ernst, Otto Liesche, and Fritz Lehmann, lignin derived from rye-straw, A., i, 546.
Beckmann, P. See Alexander Gutbier.

Beckmann, P. See Alexander Gutbier. Behr, Herbert. See Walther Borsche. Behram, Jal D. Edal. See Gilbert John Fowler.

Behre, A., estimation of dextrose, levulose, sucrose, and dextrin in the presence of each other, A., ii, 526.

Behrend, Robert, and Gustav Härtel, constitution of methyloxaluric acid, A., i, 98.

Behschnidt, Wolfram. See Paul Horr-

Bell, Frederick K., and Walter A. Patrick, the influence of copper on the rate of solution of iron in acids, A., ii, 318.

Bell, Frederick K. See also Roemer Rex Renshaw.

Bell, H. See W. Lawrence Bragg.

Bell, James Munsie, and Edward B. Cordon, the nitrotoluenes. VI. The three-component system, o-nitrotoluene-p-nitrotoluene-2:4-dinitrotoluene, A., i, 330.

Bell, James Munsie, Edward B. Cordon, Fletcher H. Spry, and Woodford White, the nitrotoluenes. V. Binary systems of o-nitrotoluene and another nitrotoluene, A., i, 234.

Bell, James Munsie, and Fletcher H. Spry, the nitrotoluenes. VII. The three-component system, p-nitrotoluene-o-nitrotoluene-2:4:6-trinitrotoluene, A., i, 330.

Bell, Richard D., and Edward A. Doisy, estimation of chlorine in solid tissues, A., ii, 272.

Bell, Richard D. See also Edward A. Doisy.

Bell, William H., application of pnitroaniline to the standardisation of sodium nitrite solutions, A., ii, 216.

Belladen, L., corrosion of certain complex brasses in sea-water. I., A., ii, 588.

Bellars, Albert Ernest, obituary notice of, T., 2120.

Benary, Erich, synthesis of pyrrole compounds from dihydropyridine derivatives, A., i, 127.

Benary, Erich, and Max Schmidt, oxalic acid derivatives of "diacetonitrile," A., i, 776.

Bender, E. See LeRoy McMaster.

Benedict, Stanley Rossiter, and Emil Osterberg, a method for the estimation of sugar in normal urine, A., ii, 660.

Benedict, Stanley Rossiter. See also A. R. Davis.

Benirschke, Fritz. See Adolf Sonn. Bennett, Charles Thomas, estimation of citronellol and citronellal by formyl-

ation, A., ii, 717.

Bennett, Charles Thomas, and F. B.

Windle, analysis of theobromine sodium salicylate, A., ii, 527.

Bennett, George Macdonald, BB'-dichlorodiethyl disulphide, T., 418. Bennett, George Macdonald, and Eustace

Ebenezer Turner, organo-metallic derivatives of chromium, tungsten, and iron, A., i, 472.

Bennett, George Macdonald, and (Miss) Edith Muriel Whincop, some derivatives of monothioethylene glycol, T., 1860.

Benrath, Alfred, nature of valency, A., ii, 38.

Benrath, Alfred, and K. Ruland, oxidising action of ceric sulphate, A., ii, 204.

Benrath, Alfred, and H. electrical conductivity of solid mixtures of salts, A., ii, 152.

Bensaude, Alfredo [with Charles Lepierre], descloizite from Portugal, A., ii, 54.

Bereza, St. See Hermann Staudinger. Bergeim, F. H. See W. Lee Lewis.

Berger, Ernest, and L. Delmas, the combustion of carbon in the presence of oxides, A., ii, 259.

Berger, G., the catalytic action of electrolytes on the photolysis of Eder's solution, A., ii, 477.

Bergh, Hijmans van den, and P. Muller, serum lipochrome, A., i, 286.

Bergholm, C., temperature coefficient of the electrical double refraction in liquids. II. A., ii, 568.

Bergmann, Max, structure of cellobiose, A., i, 707.

Bergmann, Max [with W. W. Wolff], oxidative degradation of mucic and saccharic acids to new aldehyde-acids of the sugar series, A., i, 540.

Bergmann, Max, and Franz Beck,

acetolysis of polysaccharides, A., i, 649.

Bergmann, Max, Erwin Brand, and Ferdinand Dreyer, synthesis αβ-diglycerides and unsymmetrical triglycerides, A., i, 444.

Bergmann, Max, Ferdinand Dreyer, and Fritz Radt, behaviour of certain acyl derivatives of allylamine towards halogens, A., i, 773.

Bergmann, Max, and Artur Mickeley, as a ethylglycoloside type of

aß-glucosides, A., i, 763.

Bergmann, Max, and Fritz Radt, a compound of sulphuric acid with the chloride and anhydride of benzoic acid, A., i, 666.

Bergmann, Max, Fritz Radt, and Erwin

Brand, 2-phenyl-5-chloromethyloxa-

zolidine, A., i, 688.

Bergmann, Max, and Herbert Schotte, the unsaturated products of reduction of the sugars and their transformations. I. The glucal problem, A., i, 307.

unsaturated reduction products of the sugars and their transformations. II. New anhydro-sugars; synthesis of a glucosidomannose; structure

of cellobiose, A., i, 648.

Bergmann, Max. See also Emil Fischer. Berkeley, C., pentose mononucleotides of the pancreas of the dogfish (Squalus sucklii), A., i, 476.

anaerobic respiration in some pelecypod molfuscs; its relation to glycogen, A., i, 524.

Berl, Ernst, Karl Andress, and Wilhelm Müller, estimation of benzene hydro-

carbons in coal gas, A., ii, 354.

Berl, Ernst, and W. von Boltenstern, direct estimation of water in mixed sulphurie and nitric acids, A., ii,

Berlingozzi, Sergio, chemical constitution and rotatory power; aldehydoaminoderivatives of α-aminophenyl-α-naplithylmethane, A., i, 107.

Bernaola, Victor J., the law of moduli and the theory of electrolytic dissociation; determination of moduli of refraction, A., ii, 285.

formation and constitution of kaolin, A., ii, 407.

Berndt, A. See Julius Tröger.

Berner, E., and Claus Nissen Riiber, optically active bromohydroxy-β-

phenylpropionic acids, A., i, 788. Bernheim, A. See Heinrich Wieland. ernoulli, August L., P. Dutoit, Philippe Auguste Guye, and W. Bernoulli, D. Treadwell, report of the Swiss commission on atomic weights, A., ii, 500.

Berthelot, Albert, and (Mlle.) E. Ossart, the micro-organisms producing acetone,

A., i, 909.

Bertrand, Gabriel, and Arthur Compton, influence of heat on the activity of salicinase, A., i, 282.

a peculiar modification of amydalinase and amygdalase due to ageing, A., i, 469.

Bertrand, Gabriel, and (Mme.) M. Rosenblatt, the general presence of manganese in the vegetable kingdom, A., i, 759.

Bertrand, Gabriel, and R. Vladesco, the causes of the variation of the zinc content of vertebrate animals; influence of age, A., i, 382.

probable intervention of zinc in the phenomena of fecundation vertebrate animals, A., i, 699.

the variation in the zinc content of the rabbit's body during growth, A., i, 907.

Bessemans, A., apparatus for titration with alkali hydroxides, A., ii, 213.

Besthorn, Emil, kynurenic acid, A., i,

Beth, Wilhelm. See Otto Mumm. Bethe, Albrecht, charging and discharging organic dyes, A., ii, 14.

Betti, Mario, and Assunta Capacciòli, chemical constitution and rotatory power. V. Derivatives of a-anisylethyl- $[\alpha - p - methoxyphenylethyl$ amine], A., i, 107.

Bevan, Edward John, obituary notice of, T., 2121.

Bezssonoff, N., a colour reaction common to antiscorbutic extracts and to quinol, A., ii, 608.

Bhate, S. N. GilbertJohn See Fowler.

Bhatnagar, Shanti Swarupa, studies in II. The reversal of emulsions. phases by electrolytes, and the effects of free fatty acids and alkalis on emulsion equilibrium, T., 61.

studies in emulsions. III. Further investigations on the reversal of type by electrolytes, T., 1760.

the effect of adsorbed gases on the surface tension of water, A., ii, 169.

Bhattacharya, D. N. See Nilratan Dhar.

Bhoumik, Jagadish Chandra. See Rasik Lal Datta.

Biedermann, W., studies in fermentation. V. Enzyme formation through the action of ions, A., i, 11.

starch, starch granules, and starch solutions, A., i, 162.

the co-ferment (complement) of diastase, A., i, 468.

Bielouss, Elias, reduction of trinitrotoluene, A., i, 712.

Bierry, Henri. See Alexandre Desgrez. Biffi, Pietro, comparison of methods for estimation of uric acid in blood, A., ii, 664.

Biilmann, Einar, the hydrogenation of quinhydrones, A., ii, 372.

Biilmann, Einar, and (Mlle.) Karin Thaulow, the titrimetric estimation

of mercury, A., ii, 560. Bijvoet, J. M. See N. H. Kolkmeijer. Billard, Frédéric, the hydrobenzoin and semipinacolic transpositions of propylhydrobenzoin and butylhydrobenzoin, A., i, 565.

Billeter, Jean, influence of chloride on the solubility of chlorate and its dependence on temperature, A., ii, 40.

Billy, Maurice, titanium peroxide, A., ii, 456.

titanium, A., ii, 553. Biltz, Heinrich, [the uric acids and their

derivatives], A., i, 606. the action of carbamide and of substituted carbamides on alloxan and its methyl derivatives, A., i, 616.

Biltz, Heinrich, and Hans Bülow, derivatives of 7:9-dimethyluric acid, A., i, 609.

Biltz, Heinrich, and Dorothea Heidrich, 5-hydroxy-1:3-dimethylhydantoin, A., i, 817.

Biltz, Heinrich, and Lisbeth Herrmann, the acidity of the hydrogen atoms in uric acid, A., i, 691.

Biltz, Heinrich, and Myron Heyn, the preparation of 1:3-dimethyl-ψ-uric acid and 1:3-dimethyluric acid, A., i, 610.

Biltz, Heinrich, and Maria Kobel, 5hydroxyhydantoin, A., i, 815.

Biltz, Heinrich, and Hans Krzikalla, derivatives of 1:7:9-trimethyluric acid, A., i, 609.

3:9-dimethyluric acid and its derivatives, A., i, 614.

Biltz, Heinrich, Karl Marwitzky, and Myron Heyn, 7-methyluric acid and its derivatives, A., i, 606.

7-ethyluric acid and its derivatives,

A., i, 607.

Biltz, Heinrich, and Fritz Max, methylation by means of diazomethane in the uric acid series, A., i, 131.

methylammonium iodide, A., i, 546. the alkylation of theobromine, A., i,

1:3-diethylhydantoin, A., i, 616.

derivatives of alloxanic acid (5-hydroxyhydantoin-5-carboxylic A., i, 617.

allantoin and its methyl derivatives, A., i, 893.

stability of uric acid-glycol dimethyl ether, A., i, 895.

Heinrich, and Rudolf Robl, explanation of certain transformations of oxonic acid and of allantoxaidin, A., i, 891.

3-methyloxonic acid and 3-methyl-

allantoxaidin, A., i, 893.

Biltz, Heinrich, and Karl Strufe, derivatives of 1:9-dimethyluric acid, A., i, 612.

derivatives of 1-methyl-9-ethyluric acid, A., i, 613.

derivatives of 1:3:9-trimethyluric acid, A., i, 613.

Biltz, Heinrich, and Karl Strufe [with Ernst Topp, Myron Heyn, and Rudolf Robl, 8-thiouric acids and isoxanthines containing alkyl groups in position 9, A., i<u>, 61</u>1.

Biltz, Heinrich, and Herbert Wittek, alkyl- and acyl-barbituric acids, A.,

i, 454.

Biltz, Heinrich, and Gertrud Zellner, methylation of 7-methyl-ψ-uric acid and 7-ethyl-\psi-uric acid, A., i, 610. 1:3:7:7-tetramethyluramil, A., i, 617.

Biltz, Wilhelm, an empirical law of the molecular volumes of the halogens and their compounds for all states of aggregation, A., ii, 437.

Biltz, Wilhelm, a linear relation for certain atomic volumes,

Biltz, Wilhelm, and Gustav F. Hüttig, compounds of ammonia with metallic calcium, strontium, and barium, A., ii, 201.

Biltz, Wilhelm, and Wilhelm Stollenwerk, halogen silver ammoniates, A., ii, 201.

Binder, F. Otto H., calculation of the heating value from the constitution of the compound, A., ii, 241.

constitution and heat of combustion,

A., ii, 435.

Bing, Richard, the influence of CO₃-, Cl-, and PO₄-ions on the oxidation processes in the animal body, A., i, 286.

Bingham, Kathleen E. See John L. Haughton.

Binz, Arthur, and Hugo Bauer, action of mercuric chloride on salvarsan and neosalvarsan, A., i, 629.

Binz, Arthur, and E. Haberland, sulphoxyl compounds. XII. Action of oxidising agents on formaldehyde sulphoxylate, A., i, 9.

Binz, Arthur, and E. Holzapfel, sulphoxyl compounds. XI. Derivatives of hydrosulphamine, A., i, 30, 197.

Birch, Stanley Francis, William Henry Gough, and George Armand Robert Kon, the formation and stability of spiro-compounds. VI. New derivatives of cyclopropane and cyclohexanespirocyclopropane, T., 1315.

Birckenbach, Lothar, electric oven for use in Lockemann's modification of the Marsh apparatus for the estimation

of arsenic, A., ii, 215.

Birckenbach, Lothar. See also Otto Hönigschmid.

Biren, Julius. See Rudolf Ruer.

Birge, Raymond T., the Balmer series of hydrogen, and the quantum theory of line spectra, A., ii, 666. Bishop, (Miss) E. See E. F. Burton.

Bistrzycki, Augustin, and Alexander Lecco, benzoylene- and picolinoylene-

benzdiazoles, A., i, 456. Black, John H. See Thomas

Thompson. Blaise, Edmond Émile, derivatives of 1:4-diketones and semicarbazide, A., i, 193.

preparation of acyclic δ-diketones, A.,i, 647.

Blake, J. C., the individuality of erythrodextrin, A., i, 96.

Błaszkowskie, Helena i Zofia. Wojciech Swientoslawski.

Blau, E., and R. Weingand, preparation of potassium perchlorate, A., ii, 333.

Blau, Nathan F., the estimation of creatinine in the presence of acetone and acetoacetic acid, A., ii, 718.

Bloch, Eugène. See Léon Bloch.

Bloch, Léon, and Eugène Bloch, spark spectra of mercury, copper, zinc, and thallium in the extreme ultra-violet, A., ii, 3.

some spark spectra in the extreme ultra-violet, A., ii, 286.

the spark spectra of iron and cobalt in the extreme ultra-violet, A., ii, 286.

spark spectra of gold and platinum in the extreme ultra-violet, A., ii, 364.

critical potentials and the band spectra of nitrogen, A., ii, 529.

Blom, Axel Viggo, formation of nitrophenetole from chloronitrobenzene, A., i, 413.

velocity of hydrolysis of p-nitrophenetole, A., ii, 497.

typical reaction for the differentiation of carbazole derivatives, A., ii, 664.

Bloor, W. R. See G. M. McKellips. Bloss, Chr. See Walther Dilthey.

Blount, Bertram, obituary notice of, T., 545.

Blümich, Ewald. See Heinrich Wieland.

Blum, F., and Eduard Strauss, protein chemistry. I. The capacity of combining with iodine and the constitution of the proteins, A., i, 199.

Blum, Leon, and E. Aubel, the degradation of n-valeric acid in the animal

organism, A., i, 756.

Blumann, Arnold, and Otto Zeitschel, verbenene [dehydro-α-pinene] and certain of its derivatives, A., i, 426.

Blumrich, K. See Alfred Wohl.

Blunt, Katharine, and Marie Dye, basal metabolism of normal women, A., i, 699.

Blyth, Alexander Wynter, obituary notice of, T., 546.

Boas, Friedrich, action of saponin on vegetable cells, A., i, 294.

Bobach, Franz. See Gustav Heller.

Bodansky, Meyer, biochemical studies on marine organisms. II. The occurrence of zinc, A., i, 78.

the distribution of zinc in the organism of the fish, A., i, 907.

estimation of small quantities of zinc, A., ii, 656.

Boedeker, E. See Emil Heuser.

Boedecker, Fr., and H. Volk, unsaturated bile acids. II. An isomeride of apocholic acid, A., i, 865.

Boedecker, Fr. See also J. D. Riedel, Akt. Ges.

Böeseken, Jacob, the significance of the formation of boro-complexes (and acetonic compounds) in studying the constitution of configuration of polyhydric alcohols and hydroxyacids, A., i, 843.

the distinction between α-hydroxyacids, OH·CHR·CO₂H and OH·CRR·CO₂H, by the boric acid method and the space configuration of these substances, A., i, 844.

the catalytic oxidation of alcohols under the influence of photoactive ketones and the explanation of the phenomena of catalysis, A., ii, 500.

Böeseken, Jacob, W. F. Brandsma, and H. A. J. Schoutissen, the velocity of the diazotisation reaction as a contribution to the problem of substitution in the benzene nucleus, A., ii, 34.

Böeseken, Jacob, and H. Couvert, the configuration of some sugars, A., i, 497.

Böeseken, Jαcob, and H. G. Derx, the 1:2-cycloheptanediols and the suppleness of the saturated rings, A., i, 663.

the distinction and separation of cyclic cis- and trans-1:2-diols by means of acetone, A., i, 663.

Böeseken, Jacob, and B. B. C. Felix, the influence of some a-keto-acids on the conductivity of boric acid, A., i, 844.

Böeseken, Jacob, and P. H. Hermans, a new method for determining the relative position of the hydroxyl groups in the saturated glycols, A., i, 646.

Böeseken, Jacob, and (Mlle.) P. Ouwehand, the influence of boric acid on the conductivity of phenolcarboxylic acids, A., i, 861.

Böger, Otto. See Wilhelm Schneider.

Böhm, P. See Heinrich Wieland.

Böhme, Otto. See Karl Freudenberg, and Otto Mumm.

Boehmer, H. C. See C. W. Simmons. Boehringer & Söhne, C. F., process for obtaining the active ingredient of Lobelia inflata, A., i, 267.

preparation of amino-compounds of cinchona alkaloids and their derivatives, A., i, 515.

Boeke, Hendrik Enno, the methods of investigating the molecular condition of silicate fusions, A., ii, 111.

Bönicke, K. See Julius Troeger. Boeree, Alfred Reginald. See Henry Thomas Tizard. Börjeson, Gösta, "gilding" of amicrons of some colloids, A., ii, 27.

Boerlage, (Mlle.) Louise M. See Adriaan Hendrick Willem Aten.

Boersch, Erich. See Heinrich Wieland. Böse, Margarethe, certain sulphur derivatives of isopropylamine, A., i,

primary quaternary bases, A., i. 60. Böttger. Wilhelm, electro-analytical practice, A., ii, 65.

electrolytic separation of mercury and copper, A., ii, 351.

Boetner, Felix. See G. C. Bailey. Bogue, Robert Herman, hydrolysis of the silicates of sodium, A., ii, 112.

Bohnson, Van L., the catalytic decomposition of hydrogen peroxide by sodium iodide in mixed solvents, A., ii, 185.

catalytic decomposition of hydrogen peroxide by ferric salts, A., ii, 250.

Bohr, N., the series spectra of the elements, A., ii, 137.

Bohrmann, Anna. See Josef Tillmans. Boismenu, Etienne. See Charles Moureu. Bokorny, Thomas, chemistry of enzymes, A., i, 369, 522.

Bolland, A., microchemical reactions of iodic acid, A., ii, 57.

Bolliger, Adolf. See Paul Rüggli.

Boltenstern, W. von. See Ernst Berl. Bommer, H. See Hermann Staudinger. Bommer, Max. See Richard Willstätter. Bone, William Arthur, and William Arthur Haward, gaseous combustion at high pressures. II. The explosion

air mixtures, A., ii, 628. Bone, William Arthur, and Leonard Silver, a new method for determining the volatile matter yielded by coals up to various temperatures, T., 1145.

of hydrogen-air and carbon monoxide-

Bonnefoy, (Mlle.) J., and Jh. Martinet, 6-methylisatin, A., i, 194.

Bonnell, (Miss) Jane, and Edgar Philip Perman, the colour of iron alum, T., 1994.

Borel, Ch. See Adrien Jaquerod. Borgwardt, Erich. See Otto Diels.

Born, M., volume and heat of hydration

of the ions, A., ii, 166. Born, M., and W. Gerlach, scattering of light in gases, A., ii, 632.

Bornemann, carbon nutrition in cultivated plants, A., i, 532.

Bornstein, A., adrenaline glycæmia, A., i, 289.

Borsche, method for potassium, A., ii, 349. E., the Przibylla tartrate Borsche, E. See Karl von Auwers.

hydrazines, A., i, 460. Borsche,

5-chloro-2:4-dinitrophenylhydrazine 4:6-dinitro-1:3-dihydrazino-

benzene, A., i, 461. condensation of 2:4:6-trinitrophenylhydrazine with quinones, A., i, 624.

Borsche, Walther [with Herbert Behr and Hans Wieckhorst], constitution of the bile acids, A., i, 729.

Borsche, Walther, and M. hydrindene. I., A., i, 168. Pommer.

Borsche, Walther, and A. Roth, constituents of the kawa-root. II. Kawa resin, A., i, 862.

Borsche, Walther, and A. Roth [with W. Eberlein], phenheptamethylene and certain other compounds of the phenheptamethylene series, A., i, 166.

Boruttau, Heinrich, and H. Cappenberg, the active constituents of shepherd's purse (Capsella bursa pastoris), A., i, **4**87.

Bosanquet, C. H. See W. Lawrence Bragg.

Bosch, C., compound of carbamide with calcium nitrate, A., i, 652.

Bossuet, Robert. See Pierre Jolibois.

Bothe, W., and G. Lechner, the disintegration constant of radium emanation, A., ii, 617.

Botolfsen, E. See Louis Hackspill. Bougault, J., action of ammonia on phenylpyruvic acid and benzylpyruvic acid, A., i, 177.

Bougault, J., and Paul Robin, the iodoamidines, A., i, 272.

Bouillot, J., acid methylarsenate of strychnine, A., i, 884.

Boullanger, E., the manufacture of nitrates by the biochemical oxidation of ammonia, A., i, 836.

Bouman, N., the precipitation of tin by iron, A., ii, 134.

Bouman, P. See Andreas Smits.
Bourgerel, G., the Mendeléev series arranged and brought up to date in 1917, according to the latest published atomic weights, A., ii, 102. Bourion, François, and Ch. Courtois,

the formation of hexachlorobenzene in the electrolytic preparation of chlorine, A., i, 502.

Bourquelot, Emile, and Marc Bridel, application of the biochemical method of detection of dextrose to the study of the products of the enzyme hydrolysis of inulin, A., i, 498.

Boutaric, Augustin, and M. Vuillaume, flocculation of colloidal arsenic sulphide; principle of a method of study, A., ii, 449.

Boutaric, Augustin, and M. Vuillaume, flocculation of colloidal arsenic sulphide; influence of the dilution of the electrolyte and of the quantity of electrolyte, A., ii, 537.

Boutaric, Augustin. See also Charles

Moureu.

Bouvier. See Pierre Jolibois.

Bowen, E. J. See Cyril Norman Hinshelwood.

Bowen, I. S. See Robert Andrews Millikan.

Bowman, John Herbert. See Oscar Lisle Brady.

Bowman, S., some notes on the estimation of sulphur and chlorine by the lamp method, A., ii, 706.

Boyer, Sylvester. See Theodore William

Richards.

Boyle, John Scott Walker. See Alexander McKenzie.

Braanaas, Asbjörn. See Heinrich Goldschmidt. Bradford, Samuel Clement, theory of

Bradford, Samuel Clement, theory of gels. III., A., ii, 577.
Bradley, Harold Cornelius, and H.

Bradley, Harold Cornelius, and H. Felsher, autolysis. VI. Effect of certain colloids on autolysis, A., i, 76. Brady, Oscar Lisle, and John Herbert

Brady, Oscar Liste, and John Heroen Bowman, dinitrotolylhydrazines, T., 894.

Brady, Oscar Lisle, and William Howieson Gibson, 2:4:6-trinitrotolylmethyl-nitroamine, T., 98.

Braecke, (Mille.) Marie. See Marc Bridel.

Bragg, W. Lawrence, and H. Bell, the dimensions of atoms and molecules, A., ii, 689.

Bragg, W. Lawrence, R. W. James, and C. H. Bosanquet, the intensity of reflection of X-rays by rock-salt. II., A., ii, 477.

II., A., ii, 477.

Braley, S. A., and F. B. Hobart, a new method for the detection and estimation of cabelt. A. ii 352

tion of cobalt, A., ii, 352.

Braley, S. A., and Ralph F. Schneider, structure of gold amalgams as determined by metallographic methods, A.,

ii, 406.

Bramlet, H. B. See Roger Adams.
 Branch, Gerald Eyre Kirkwood, and Julian F. Smith, a bivalent nitrogen derivative of carbazole, A., i, 56.

Brand, Erwin. See Max Bergmann.
Brand, Kurt, reduction of organic halogen compounds. IV. The tetraarylbutane series and aa85-tetraphenylbutatriene, A., i, 783.

reduction of organic halogen compounds. VI. ααδδ-Tetra-aryl-Δβ-butinene, A., i, 785.

Brand, Kurt, and Franz Kercher, reduction of organic halogen compounds.
 V. Phenol ethers of the tetraphenyl-butane series, A., i, 787.

Brand, Kurt, and Otto Stallmann, thiophenols. IV. Thiophenol ethers of triphenylmethane and the auxochromic action of alkylthiol groups, A., i, 664.

Brandsma, W. F. See Jacob Böeseken. Brandt, Leopold, catalytic combustion of sucrose, A., i, 11.

Brass, Kurt, and Ludwig Köhler, dibenzothianthrenediquinone, A., i, 435.
 Braun, Hans Julius. See Otto Ruff.

Braun, Julius von, and Otto Braunsdorf, syntheses of homomorpholine and benzohomomorpholine, A., i, 435.

unsaturated residues in chemical and pharmacological relationship. III.,

A., i, 772.

Braun, Julius von, and Georg Kirschbaum, benzo-polymethylene compounds. II. Brominated alicyclic substitution products of tetrahydronaphthalene and Δ¹-dihydronaphthalene, A., i, 407.

Braun, Julius von, and Karl Moldänke, styrene from ethylbenzene, A., i, 405.

Brauner, Bohuslav, the new International Commission on chemical elements, A., ii, 691.

A., ii, 691.

Brauns, Dirk Hendrik, and John A.

MacLaughlin, the estimation of phosphatides, A., ii, 72.

Brauns, Dirk Hendrik. See also Walter F. Baughman, and George Samuel Jamieson.

Brauns, R., formation and stability of modifications of polymorphous substances below their transition temperature, A., ii, 387.

perature, A., ii, 387.
Braunsdorf, Otto. See Julius von Braun.
Bray, William Crowell, a periodic reaction in homogeneous solution and its relation to catalysis, A., ii, 629.

Breazeale, J. F., the estimation of calcium in the presence of phosphates, A., ii, 132.

Breazeale, J. F., and Lyman J. Briggs, concentration of potassium in orthoclase solutions not a measure of its availability to wheat seedlings, A., i, 388.

Bredt, Julius, and Aug. Goeb, p-diketocamphane and the constitution of Schrötter's oxycamphor, A., i, 257.

Bregenzer, Albert. See Emil Knoevenagel.

Brendel-Wirminghaus, Sophie, pole effect in the arc spectrum of manganese, A., ii, 421. Brenner, Widar, action of neutral salts on the resistance to acids, permeability, and life of protoplasts, A., i, 209.

Bressanin, Giuseppe, reaction of tin salts, A., ii, 464.

Bretschneider, R. See Hermann Ost. Brewster, Joseph F., use of edestin in

determining the proteolytic activity of pepsin, A., ii, 419.

Bridel, Marc, preservation of gentian preparations prepared from dry, un-

fermented gentian root, A., i, 152. action of emulsin on galactose in solution in propyl alcohol of different strengths, A., i, 469.

action of emulsin from almonds on lactose in solution in 85% ethyl alcohol, A., i, 824.

application of the law of mass action to the results obtained in the action of β-galactosidase on galactose in solution in propyl alcohol, A., ii, 442.

Bridel, Marc, and R. Arnold, the use of different precipitating agents in the preparation of emulsin from almonds, A., i, 282.

a method of applying to plants the biochemical process for the detection

of dextrose, A., ii, 465.

Bridel, Marc, and (Mlle.) Marie Braecke, the presence of a glucoside decomposable by emulsin in two species of Melampyrum, A., i, 840.

Bridel, Marc. See also Émile Bourquelot. Briggs, Henry, physical exertion, fitness, and breathing, A., i, 141.

adsorption of gas by charcoal, silica,

and other substances, A., ii, 624.

Briggs, Lyman J. See J. F. Breazeale. Briggs, Samuel Henry Clifford, valency and co-ordination, T., 1876.

the elements regarded as compounds of the first order, A., ii, 583.

Brill, Harvey C., esters of aminobenzoic acids, A., i, 727.

Briner, Emil, some negative attempts to transmute elements in accordance with Marignac's views on the unity of matter, A., ii, 635.

Brinkley, Stuart R. See Harry Ward

Brinton, Paul H. M.-P., F. N. Schertz, William G. Crockett, and P. P. Merkel, modification of the Dumas method, and application of the Kjeldahl method to the estimation of nitrogen in nitronaphthalenes, A., ii, 592.

British Cellulose and Chemical Mfg. Co., Ltd., Walter Bader, and Donald Archer Nightingale, manufacture of alkylamides of aromatic sulphonic acids,

A., i, 786.

British Dyestuffs Corporation, Ltd., Arthur George Green, and Arthur Brittain, manufacture of symmetrical alkylated m-phenylenediamines, A., i, 805.

British Dyestuffs Corporation, Ltd., Arthur George Green, and Douglas Arthur Clibbens, manufacture of chlorinated derivatives of toluene, A., i, 853.

British Dyestuffs Corporation, Ltd., Arthur George Green, and Alfred Edwin Herbert, manufacture of chlorinated derivatives of toluene, A., i, 854.

Brittain, Arthur. See British Dyestuffs

Corporation, Ltd.

Britton, Hubert Thomas Stanley, the solubility of glucinum sulphate in water and sulphuric acid at 25°, T., 1967.

separation of aluminium from glucinum. I. and II., A., ii, 657, 712.

Britton, Hubert Thomas Stanley, and

Arthur John Allmand, the system, potassium sulphate-glucinum sulphate-water at 25°, T., 1463.

Brochet, André [Victor], preparation of active hydrogenating metals, A., ii,

the preparation of active hydrogenating metals in liquid media, A., ii, 101.

Brochet, André, and R. Cornubert, the tetrahydronaphthols, A., i, 563.

Brodin, P. See Chauffard.

Brock, A. van den, general system of the isotopes, A., ii, 295.
Brocksmit, T. C. N., crystalline magne-

sium carbonate, A., ii, 263.

behaviour of ammonium carbonate towards magnesium, A., ii, 655.

Brönsted, Johannes Nicolaus, the influence of salts on chemical equilibria in solutions, T., 574.

Brösslera, F., the existence of helium

nuclei in the nuclei of radioactive

elements, A., ii, 366.
Broglie, Louis de, and A. Dauvillier, the electronic structure of heavy atoms, A., ii, 475.

Broglie, Louis de. See also Maurice de Broglie, and A. Dauvillier.

Broglie, Maurice de, the corpuscular spectra of the elements, A., ii, 232. the corpuscular spectra; laws of the photo-electric emission for high frequencies, A., ii, 292.

Broglie, Mauricede, and Louis de Broglie, Bohr's model of the atom and the corpuscular spectra, A., ii, 323.

the corpuscular spectra of the elements, A., ii, 615.

Bromig, Karl. See Conrad Amberger.

Brooks, Matilda Moldenhauer, comparative studies on respiration. XIV. Antagonistic action of lanthanum, A., i, 385.

comparative studies on respiration. XV. The effect of bile salts and of saponin, A., i, 385.

Brooks, S. C., the kinetics of inactivation of complement by light, A., i, 143. the mechanism of complement action,

A., i, 143.

Broughall, L. St. C., dimensions of the atom, A., ii, 445.

Brown, Elmer B. See Treat Baldwin Johnson.

Brown, Joseph Grant, states of iron in nitric acid, A., ii, 676.

Brown, Oliver W. See C. O. Henke.

Brown, Ralph L. See Charles Moureu. Brown, S. M. See Walter Pearson Kellev.

Browne, Charles A., and C. A. Gamble, revision of the optical method for analysing mixtures of sucrose and raffinose, A., ii, 661.

Browning, Philip Embury, qualitative separation and detection of uranium, vanadium, and chromium when present together, A., ii, 279.

Browning, Philip Embury, and Lyman E. Porter, separation of gallium from indium and zinc by fractional crystallisation of the cessium gallium alum, A., ii, 265.

Browning, Philip Embury. See also Lyman E. Porter.

Brütsch, Hans. See Hans Eduard Fierz.

Bruhns, G., volumetric method for the estimation of acids and bases which yield insoluble salts, A., ii, 592.

device for filling burettes, A., ii, 705. Brulé, Marcel, and H. Garban, urobilin and stercobilin [in the urine] of infants, A., i, 755.

Brunel, Roger Frederick, J. L. Crenshaw, and Elise Tobin, purification and some physical properties of certain aliphatic alcohols, A., i, 299.

Bruni, Giuseppe, solubility of crystalline substances in caoutchouc, A., i, 352.

new process for the cold vulcanisation of caoutchoue. A., i. 575.

of caoutchoue, A., i, 575.

Bruni, Giuseppe, and C. Pelizzola, presence of manganese in raw caoutchoue and the origin of tackiness, A., i, 798.

Bruni, Giuseppe, and E. Romani, mechanism of the action of certain accelerants of the vulcanisation of caoutchouc, A., i, 734.

Brunner, Erich, the action of fluorine on potassium hydrogen sulphate, A., ii, 45.

Brunswik, Hermann, the microchemistry of chitosan compounds, A., i, 259.

Bruylants, *Pierre*, and G. Desmet, determination of the atomic weight of tellurium, A., ii, 448.

Bruyn, Cornelis Adriaan Lobry de, passivity; researches on iron and nickel, A., ii, 153.

Buchheim, Kurt. See Wilhelm Steinkopf.

Buchert, Rudolf. See Bruno Emmert.Buck, Johannes Sybrandt. See Isidor Morris Heilbron.

Buckmaster, George Alfred, absorption curve of hæmoglobin and carbon dioxide, A., i, 632.

Budkewicz, Eugen von. See Jakob Meisenheimer.

Buehrer, Theo. F. See Joel H. Hildebrand.

Bülow, Hans. See Heinrich Biltz.

Bürker, K., necessity for exact hæmoglobin estimations and erythrocyte [red corpuscle] counts, A., ii, 720.

Bürki, Fr., and Fr. Schaaf, kinetics of the decomposition of hydrogen peroxide, A., ii, 389.

Büscher, Friedrich. See Erich Tiede. Buhk, Gustav. See Karl Andreas

Hofmann.
Bullis, D. E. See J. Shirley Jones, and R. H. Robinson.

Bullnheimer, a new method for the evaluation of zinc dust, A., ii, 655.

Buning, H. L., the Hofmann and Curtius transformations in relation to steric hindrance, A., i, 520.

Bunting, Elmer N. See Edward Wight Washburn.

Burdick, Charles L., and L. Stanley Freed, the equilibrium between nitric oxide, nitrogen peroxide, and aqueous solution of nitric acid, A., ii, 313.

Burger, B. See Walther Dilthey. Burgess, Henry. See Gilbert Thomas

Morgan.
Burgess, Kenneth E., the toxicity to-

wards Staphylococcus of dilute phenol solutions containing sodium benzoate, A., i, 291.

Burke, Winthrop M., ionisation of aqueous solutions of ammonia in the presence of carbamide, A., ii, 79.

Burnett, Robert Alexander. See John Arnold Cranston.

Burns, J. W. See Arthur C. Neish. Burns, Robert Martin. See Hugh Stott Taylor. Burrows, George Joseph, the rate of hydrolysis of methyl acetate by hydrochloric acid in solutions containing sucrose, T., 1798.

volume changes in the process of solution, A., ii, 308.

the hydrolysis of carbamide hydrochloride, A., ii, 319.

Burrows, George Joseph, and Eustace Ebenezer Turner, experiments on the production of compounds containing arsenic as a centre of optical activity, T., 426.

some additive compounds derived from arsines, T., 1448.

the constitution of the nitroprussides. II. The alkylation of nitroprussic

acid, T., 1450.

Burton, E. F., and (Miss) E. Bishop, coagulation of colloidal solutions by electrolytes; influence of concentration of sol, A., ii, 176.

Burton, Harold, and James Kenner, the influence of nitro-groups on the reactivity of substituents in the benzene III. The partial reducnucleus. tion of the dinitrotoluenes by stannous chloride and hydrochloric acid, T., 1047.

Butescu, D. See Eugène Ludwig.

Butler, Gerald Snowden. See Horace Barratt Dunnicliff.

Butler, O. See Todd O. Smith. Buttgenbach, H., minerals from Slata, Tunis, A., ii, 268.

Buttgenbach, H., and Camille Gillet, cesarolite, a new mineral, A., ii,

Byk, Alfred, theorem of corresponding state and the quantum theory of gases and liquids, A., ii, 163.

C.

Cabrera, T. See E. Babe.

Cady, Hamilton P., and E. J. Baldwin, reactivity and conductance of benzene solutions, A., ii, 309.

Cain, John Cannell, obituary notice of, T., 533.

Cake, W. Ellwood. See Hobart Hurd Willard.

Calcagni, Gennaro, solubility of sulphur in alkali hydroxides in the cold, A., ii, 195.

Calderaro, E. See E. Oliveri-Mandalà. Caldwell, R. D. See H. C. Moore.

Cameron, Alexander Thomas, and M. S. Hollenberg, the nature of the combination of the chlorine in urine, A., i, 78.

Camis, M., physico-chemical examination of hæmoglobin; state of aggregation of hæmoglobin molecules, A., i, 821.

Campbell, Colin. See Harold Baily Dixon.

Campbell, J. M. H., and Edward Palmer Poulton, relation of oxyhæmoglobin to the carbon dioxide of the blood, A., i, 141.

Campo, Angel del, and Miguel Catalán, interpolation table for the calculation of spectral series, 292.

Canac, François, study of crystals by X-rays, A., ii, 245.

Canals, E., estimation of calcium and magnesium in different saline solutions, A., ii, 349.

Canneri, G., thallic nitrite, A., ii, 47.

Canneri, G. See also V. Cuttica. Cano, José Marín, and José Ranedo, influence of the acid radicle on the anæsthetic properties of amino-alco-hols, A., i, 384.

Capacciòli, Assunta. See Mario Betti. Cappenberg, H., analysis of shepherd's purse (Capsella bursa pastoris), A., ii,

Cappenberg, H. See also Heinrich Boruttau.

Capps, $Julian\ H.$, estimation of metallic aluminium and of aluminium oxide in the commercial metal, A., ii,

Cardini, Mario, behaviour of nevralteine with quinine salts; easy method for its identification, A., ii, 664.

Cardoso, Ettore, vapour pressures of hydrogen sulphide, A., ii, 327.

Carnot, P., P. Gérard, and (Mile.) S. Moissonnier, action of the urease from soja beans on the animal organisms, A., i, 283.

Carpenter, C. D., determination of melting points, especially of potassium chlorate, A., ii, 332.

Carpenter, Henry Cort Harold, and Constance F. Elam, stages in the recrystallisation of aluminium sheet on heating, and birth of crystals in strained metals and alloys, A., ii, 641.

Carpiaux, Em. See Ach. Grégoire. Carracido, J. R., and Antonio Madinaveitia, constituents of Lythrum salicaria, A., i, 704.

Carter, C. L., chemical investigation of mutton-bird oil. I., A., i, 833. Carver, Emmett K. See T.

TheodoreWilliam Richards.

Cashmore, Albert Eric, Hamilton Mc-Combie, and Harold Archibald Scarborough, the velocity of reaction in mixed solvents. I. The velocity of saponification of two ethyl esters in ethyl alcohol-water mixtures, T., 970.

Casparis, P., [colour reaction for] lignified cell membranes, A., ii, 564.

Casper, Johannes. See Jakob Meisenheimer.

Cassel, H., heat of mixture, A., ii,

Castan, Pierre. See Amé Pictet.

Caste, P. See Louis Meunier.

Catalan, Miguel. See Angel del Campo. Cerighelli, Raoul. See Léon Maquenne. Ceriotti, Antonio, estimation of alkaloids in cacao, A., ii, 470.

Cernatesco, Radu, application of Dalton's law to concentrated solutions,

A., ii, 576.

Cessna, Ruth. See Victor E. Nelson. Chaborski, Gabriela. See G. G. Lon-

ginescu.

Chadwick, James, the charge on the atomic nucleus and the law of force, A., ii, 7.

Chadwick, James. See also (Sir) Ernest Rutherford.

Chalkley, Lyman, jun. See Morris S.

Challenger, Frederick, and Charles Frederick Allpress, organo-derivatives of bismuth. IV. The interaction of the halogen derivatives of tertiary aromatic bismuthines with organo-derivatives of magnesium and mercury, T., 913,

Challenor, William Arthur Percival. See Gilbert Thomas Morgan.

Chambers, Victor J. See Otto W. Cook. Chandler, L. R. See E. W. Schultz. Chao, J. C. See P. Karrer.

Chapas, solubility of the isomeric nitroanilines in m-xylene, A., i, 235.

Chapin, Harold Canning. See Gregory Paul Baxter.

Chapin, Robert M., Deniges's test for the detection and estimation of methyl alcohol in the presence of

ethyl alcohol, A., ii, 598. estimation of cresol by the phenol reagent of Folin and Denis, A., ii,

599.

Chapman, David Leonard, and Herbert John George, abnormality of strong electrolytes, A., ii, 371.

Chapman, James E. See William M.

Thornton, jun.

Chapman, William Ronald, the propagation of flame in mixtures of ethylene and air, T., 1677.

Charpy, Georges, and Gaston Decorps, the determination of the degree of oxidation of coals, A., ii, 709.

Frederick Daniel, Chattaway, Francis Earl Ray, the decomposition of tartaric acid by heat, T., 34.

Chatterji, Nitya Gopal, volumetric estimation of mixtures of permanganate, dichromate, and chromic salts, A., ii, 713.

Chaudron, Georges, reversible reactions of carbon monoxide on the oxides of iron, A., ii, 178.

reversible reactions of hydrogen and carbon monoxide on the metallic oxides, A., ii, 584.

Chaudun, (Mlle.) Andrée. See H. Colin. Chauffard, P. Brodin, and Grigant, the action of arrest by the liver on the exogenous uric acid, A., i, 288.

Chavanne, Georges, and Louis Jacques Simon, application of the critical temperature of solution in aniline to the analysis of light petroleums, A., ii, 354.

Chelle, L., normal thiocyanate content of the body, A., i, 206.

Chemische Fabrik Griesheim-Elektron, preparation of ethyl alcohol from acetaldehyde, A., i, 155.

preparation of acetaldehyde acetylene, A., i, 395.

Chemische Fabrik von Friedrich Heyden, preparation of hydantoins, A., i, 618, 619.

Chemische Fabrik Rhenania Akt.-Ges., Bernhard Conrad Stuer, and Walther Grob, manufacture of additive and condensation products containing nitrogen from acetylene and ammonia, A., i, 852.

Chemische Werke Grenzach, Akt.-Ges., preparation of a phenylated aminohydrindenecarboxylic acid, A., i, 28.

Chéneveau, Charles, the variation of the specific refraction of salts dissolved in dilute solutions, A., ii, 421.

Cheng, Y. C. See William Draper Harkins.

Chercheffsky, N., critical temperature of solution of hydrocarbons in aniline and its application to the analysis of light

petroleums, A., ii, 280.

Chevallier, A. See Ch. Porcher.

Chevenard, P., the action of additions on the anomaly of dilatation of ferronickels; application to iron-nickelchromium alloys, A., ii, 336.

relation between the anomalous dilatation and the thermal variation of magnetisation of ferromagnetic substances, A., ii, 484.

Chevenard, P. See also A. Portevin. Chevry. See Jolibois.

Chibnall, Albert Charles, and Samuel Barnett Schryver, nitrogenous metabolism of the higher plants. lation of proteins from leaves, A., i,

Child, C. D., a band spectrum from

mercury vapour, A., ii, 3.

Chrétien, E., and Henri Vandenberghe, estimation of hydrogen sulphide in natural waters, A., i, 214.

Christensen, Harald R., and Niels Feilberg, estimation of potassium in soils and fertilisers, A., ii, 711.

Christiansen, Johanne, a new method for the estimation of electrolytic conductivity of solutions, A., ii, 9.

Johanne, and Christiansen, Arrhenius, solubility of naphthalene in aqueous solutions of alcohols and fatty acids, A., ii, 385.

Walter G., hypophos-Christiansen, phorous acid preparation of arsphenamine (3:3'-diamino-4:4'-dihydroxyarsenobenzene dihydrochloride), A., i, 70.

indirect reduction of 3-amino-4hydroxyphenylarsinic acid to salvarsan, A., i, 370.

Christman, Adam A., and Howard B.
Lewis, lipase. I. The hydrolysis of the esters of some dicarboxylic acids by the lipase of the liver, A., i, **755.**

Christopoulos, Takis C. See Friedrich Kehrmann.

Churchill, Helen. See W. H. Peterson. Ciacco, C., amino-nitrogen in the urine as indicated by the formol method, A., i, 834.

Ciamiolan, Giacomo Luigi, and Riccardo Ciusa, considerations on the inner constitution of benzene and certain

heterocyclic nuclei, A., i, 329.

Ciamician, Giacomo Luigi, and Ciro

Ravenna, function of alkaloids in plants, A., i, 85.

influence of certain organic compounds on the development of plants. V.,

Citron, H., a modification and simplification of Kjeldahl's method of nitrogen estimation, A., ii, 58.

detection of acetone in urine, A., ii,

Ciusa, Riccardo, certain salts with para-, ortho-, and meta-quinonoid struc-ture. II., A., i, 63. azopyrroles. I., A., i, 365.

decomposition of aldehydo-phenylhydrazones, A., i, 749.

Ciusa, Riccardo, and A. Galizzi, some constituents of lignites, A., ii, 343.

Ciusa, Riccardo, and G. Zerbini,
Doebner's reaction. III., A., i, 195.

Ciusa, Riccardo. See also Giacomo Luigi Ciamician.

Claisen, Ludwig [with O. Tietze], 2:2-dimethylchroman, A., i, 263.

Clapham, Henry William. See Harry Hepworth.

Clarens, J., application of the laws of chemical kinetics to quantitative analysis; fractional estimation tannins in general and tannins of wine in particular, A., ii, 719.

Clark, Anne Barbara. See Harold Raistrick.

Clark, E. P., preparation of galactose, A., i, 647.

Clark, E. P. See also Phabus A. Levene.

Clark, George L., and R. B. Iseley, corrosive action of chlorine-treated water. I. The effects of steel on the equilibrium: Cl+HO

☐HCl+HClO, and of products of the equilibrium on steel, A., ii, 94.

Clark, George L., A. J. Quick, and William Draper Harkins, properties of subsidiary valency groups. I. Molecular volume relationships of the hydrates and ammines of some cobalt compounds. II. Subsidiary group mobility as studied by the heat decomposition of some cobalt-

ammines, A., ii, 116.

Clark, Guy W., effects of citrates, malates, and phosphates on the calcium of the blood, A., i, 633.

Clark, William Mansfield. See Harper F. Zoller.

Clarke, Hans Thacker. See Ivar N. Hultman.

Clarke, J. R., effect of the rays from radium, X-rays, and ultra-violet rays on glass, A., ii, 569.

Classen, Alexander, and O. Ney, revision of the atomic weight of bismuth, A., ii, 119.

Claude, Georges, the actual state of the synthesis of ammonia by hyperpressures, A., ii, 258.

preparation of hydrogen by the partial liquefaction of water-gas, A., ii,

Claudin, J. See Martin Battegay.

Clemenger, Francis J. See Alexander Fleming.

Clemens, Cecil A., application of the immersion refractometer to the analysis of aqueous salt solutions, A., ii, 650.

Clementi, Amando, new hypothesis on the physiological significance of the protamines and histones with respect to nuclear metabolism, A., i, 74.

relationships between the peptidolytic activity of intestinal erepsin and the chemical constitution of the

substrate, A., i, 144.

Clendinnen, Frederick William Jeffrey, and Albert Cherbury David Rivett, system, ternary animonium chloride-manganous chloride-water, T., 1329.

Clevenger, F. See Arno JosephViehoever.

Clibbens, Douglas Arthur. See British Dyestuffs Corporation, Ltd.

Clifford, Winifred Mary, colorimetric estimation of carnosine, A., ii, 604.

Clinton, Guy, further light on the theory of the conductivity of solutions, A., ii,

Cloetta, Max, chemistry and pharmacology of digitoxin and its decom-

position products, A., i, 39. Clogne, René, and J. Réglade, chemical examination of the amniotic fluid,

A., i, 754.

Clogne, René, and A. Richaud, sodium fluoride or citrate as anti-coagulant in estimating blood sugar, A., ii, 355.

Clotofski, Fritz, compound formation and the electromotive behaviour of cerium in its alloys with iron and zinc, A., ii, 203.

Clough, George William. See Frederick

William Atack. C., influence Cochrane, Donald potassium permanganate on Kjeldahl

nitrogen estimations, A., ii, 127. Coehn, Alfred, and Heinrich Tramm,

mechanism of photochemical cesses, A., ii, 476.

Coffey, Samuel, the action of the chlorides of sulphur on substituted ethylenes; the action of propylene on sulphur monochloride and the synthesis of \(\beta\beta'\)-dichlorodi-n-propyl sulphide, T., 94.

the mechanism of the oxidation of drying oils as elucidated by a study of the true oxygen absorption. Linseed oil and its fatty acids, T.,

linolenic and hexabromostearic acids and some of their derivatives, T.,

the mechanism of the oxidation of drying oils as elucidated by a study of the true oxygen absorption. II. Linolenic and linolic acids, T., 1408.

Coffey, Samuel, and Charles Frederick Ward, the preparation of some allyl compounds, T., 1301.

Coffignier, Ch. See Paul Nicolardot. Cofman, Victor, preparation of 3:5-di-

iodosalicylic acid and its solubility in water, A., i, 177.

Cohen, Clara, the formation of acet aldehyde in the decomposition of sugar by moulds, A., i, 150. Cohen, Ernst, W. D. Helderman, and

A. L. Th. Moesveld, thermodynamics of normal elements. VIII., A., ii, 155.

Cohen, Ernst, C. T. Kruisheer, and A. L. Th. Moesveld, thermodynamics of normal elements. IX. Temperature formulæ of normal elements and the specific heat of the salts contained in these elements, A., ii., 156.

Cohen, Ernst, and J. J. Wolters. thermodynamics of normal elements. VII. Temperature formula of the Weston normal element and the solubility curve of CdSO4, §H2O,

A., ii, 155.

Cohen, Julius Berend, and Herbert Grace Crabtree, structure and colour

of the azine scarlets, T., 2055.

Cohen, Julius Berend. See also Victor Froelicher, John Richard Scott, and Akira Shimomura.

Cohn, Felix, influence of muscular work on the lactacidogen content of the red and white musculature of the rabbit, A., i, 529.

Cohn, Robert, detection of formaldehyde by resorcinol and sulphuric acid, A., ii, 663.

Coisset, P. See Jh. Martinet.

Colin, H., some corollaries of the laws of hydrolysis by enzymes, A., ii, 607.

Colin, H., and (Mlle.) Andrée Chaudun, application of the law of hydrolysis to the determination of molecular weights. A., ii, 255.

Collatz, F. A., and Clyde H. Bailey, activity of phytase as determined by the specific conductivity of phytinphytase solutions, A., i, 369.

Collett, M. E., the toxicity of acids to II. and III., A., i, 835. infusoria.

Collie, John Norman, and (Miss) Amy Ada Beatrice Reilly, a new type of iodine compound, T., 1550.

Collins, Hawksworth, the fundamental

constants of nature, A., ii, 86.

the relative volumes of the chemical

elements, A., ii, 168.

Collip, J. B., alkali reserve of the blood of lower vertebrates, A., i, 379.

Collip, J. B., the acid-base exchange between the plasma and the red blood

cells, A., i, 379.

Colver, C. W., and William Albert
Noyes, synthesis of anthracene from

naplithalene, A., i, 409.

Compton, Arthur, mechanism of enzyme action. I. Rôle of the reaction of the medium in fixing the optimum temperature of a ferment, A., i, 137.

Compton, Arthur. See also Gabriel Bertrand.

Compton, Arthur H., the degradation of γ-ray activity, A., ii, 366.

Compton, Arthur H., and C. C. van Voorhis, cathode fall in neon, A., ii, 7. Compton, Karl T., and E. G. Lilly, excitation of the spectrum of helium, A., ii, 2.

Compton, Karl T., and P. S. Olmstead, radiating and ionisation potentials of

hydrogen, A., ii, 368.

Compton, Karl T. See also H. D. Smyth. Conant, James B., and Alexander D. Macdonald, additive reactions of phosphorus haloids. I. The mechanism of the reaction of the trichloride with benzaldehyde, A., i, 69.

Connell, V. B., simple form of Kipp's apparatus for the generation of hydro-

gen sulphide, A., ii, 109.

Conradt, Karl. See Wilhelm Strecker. Consonno, Fortunato, and C. Apostolo, constitution of phenolphthalein, A., i. 346.

Consonno, Fortunato, and A. Cruto, synthesis of basic colouring matters by the condensation of acetylene with aromatic bases, A., i, 679.

Contardi, Angelo, certain transformations of trioxymethylene, A., i, 93. D.M. (diphenylamine arsenious chloride), A., i, 174.

Cook, James Wilfred. See Edward de Barry Barnett.

Cook, Otto W., and Victor J. Chambers, the condensation of acetylene with benzene and its derivatives in the presence of aluminium chloride, A., i, 332.

Cooke, William Ternent, influence of sodium chloride and sodium sulphate on the solubility in water of sodium

B-naphthalenesulphonate, A., i, 334.

Cooper, Evelyn Ashley, and Hilda

Walker, the nature of the reducing substance in human blood, A., i, 698.

Cooper, Hermon C. See Floyd H. Edminster.

Copaux, Hippolyte, rapid process for estimating phosphoric acid, A., ii, 707.

Copisarow, Maurice, the Friedel-Crafts' reaction. III. Migration of alkyl groups in the benzene nucleus, T., 1806.

Copisarow, Maurice [with Cyril Norman Hugh Long], the Friedel-Crafts' reaction. II. Migration of halogen atoms in the benzene nucleus, T.,

Cordebard, H., method of estimating and verifying the purity of organic compounds by oxidation with chromic

acid, A., ii, 280.

Cordes, Fr. See A. Machens.

Cordon, Edward B. See James Munsie Bell.

Corfield, Charles Edwin, and C. J. Eastland, the official method for the estimation of hydrocyanic acid, A., ii, 526.

Corfield, Charles Edwin, and Elsie Woodward, estimation of sodium arsenate, A., ii, 519.

Cornubert, R., spectro-chemical study of the allyl- and methylallylcyclohexan-2-ones, A., ii, 5.

oxidation of a-methyl-a-allylcyclohexanone by permanganate alkaline solution, A., i, 422.

allylcyclohexanones and the methylallylcyclohexanones, 730.

Cornubert, R. See also André Brochet. Corral, José Maria de, effect of temperature on the reaction of blood, A., i,

Corti, Hercules, estimation of tin in cassiterite, A., ii, 416.

Corvi, A. See Hermann Staudinger. Costa, Joseph. See Ernest Little.

Coster, Dirk, precision measurements in the L series of the heavier elements, A., ii, 363.

the fine structure of the X-ray series, A., ii, 532.

Couch, Henry B. See James Flack Norris.

Couroux, P. See Marcel Sommelet. Courtois, Ch. See François Bourion.

Courtonne, H., the contrary action of soluble chlorides and sulphates on starchy materials, A., i, 96.

Couvert, H. See Jacob Böeseken. Coward, Katharine Hope, and Jack Cecil Drummond, researches on the fat-soluble accessory substance. IV.

Nuts as a source of vitamin-A, A., i, 87. formation of vitamin-A in living

plant tissues, A., i, 837. Coward, Katharine Hope. See also

Jack Cecil Drummond.

Cox, Henry Edward, the influence of the solvent on the temperaturecoefficient of certain reactions; a test of the radiation hypothesis, T., 142.

Crabtree, Herbert Grace. See Julius Berend Cohen.

Cranston, John Arnold, and Robert Alexander Burnett, the adsorption of thorium-B and thorium-C by ferric hydroxide, T., 2036.

Crehore, Albert C., an atomic model based on electromagnetic theory. I., A., ii, 632.

Crenshaw, J. L. See Roger Frederick Brunel.

Cribier, J, new procedure for the estimation of arsenic, A., ii, 653.

Cristol. See Galavielle.

Crittenden, E. C. See E. B. Rosa.

Crocker, Ernest C., significance "lignin" colour reactions, A., i, 839.

Crockett, William G. See Paul H. M.-P. Brinton.

Croll, Hilda M. See Victor Caryl Myers.

Crommelin, Claude Auguste, the importance of experiments at very low temperatures, A., ii, 573.

Crommelin, Claude Auguste. See also Emile Mathias.

Crompton, Holland, and (Miss) Phyllis Mary Triffitt, dichloroacetates and chlorobromoacetates from aB-dichlorovinyl ethyl ether, T., 1874.
Crossley, Arthur William, and (Miss)

Nora Renouf, 1:1-dimethylcyclohexane from methylheptenone, T., 271.

Crouzier, P. See Victor Grignard. Crowther, J. Arnold, J-radiation, A., ii,

673.

Cruickshank, J., adsorption of aniline dyes and inorganic salts by solutions of lecithin, A., ii, 89.

Crussard, L., the laws governing the propagation of combustions, A., ii, 32. Cruto, A. See Fortunato Consonno.

Csányi, Wilhelm, the indicator properties of two new phthaleins (1:2:3-xylenolphthalein and o-a-naphtholphthalein), A., ii, 270.

Culbertson, James B. See William H. Ross.

Cummins, A. B. See Walter Pearson Kelley

Curie, (Mlle.) Irène, the atomic weight of

chlorine in some minerals, A., ii, 396. Curie, Maurice, action of the red and infra-red rays on phosphorescent substances, A., ii, 233.

action of infra-red rays on phosphorescence, A., ii, 616.

Curti. A. See Michele Giua.

Curtius, Theodor, and Friedrich Wilhelm Haas, the hydrazide and azide of benzylsulphonic acid, A., i, 747.

Curtius, Theodor, and Wilhelm Sieber, conversion of malonic acid into glycine and of methylmalonic acid α-alanine, A., i, 653.

Curtman, Louis J., and D. Hart, the preparation and properties of some salts of uric acid, A., i, 519.

Curtman, Louis J., and N. H. Hecht, approximate estimation of iron and manganese in systematic qualitative analysis, A., ii, 522.

Cushny, Arthur Robertson, physiological action of optical isomerides. Hyoscines and hyoscyamines, A., i, 289.

Cusmano, Guido, intramolecular condensations by means of the oxyazogroup, A., i, 132.

Cusmano, Guido, and L. Della Nave, partial reduction of nitroazoxy benzenes by means of hydrogen and platinum, A., i, 622.

Cuttat, Léon. See Marcel Duboux.

Cuttica, V., and G. Canneri, thallous ferricyanide, A., i, 322.

Cuy, Eustace J., comparison of Tam-mann's and Cuy's theories of the periodic irregularities of physical properties in homologous series, A., ii, 429.

valency theory of G. Lewis and the asymmetry of the water molecule A., ii, 584.

preparation of colloidal manganese dioxide, A., ii, 642.

Daeves, Karl, the calculation of the positions of entectic points and solubility limits in systems containing iron, A., ii, 454.

Dains, Frank Burnett, Roy Irvin, and C. G. Harrel, reaction of the formamidines. VIII. Some thiazolidone derivatives, A., i, 362.

Dains, Frank Burnett, and Walter S. Long, the reactions of the formamidines. IX. The synthesis of 5phenylpyrazole-4-carboxylic acid, A., i, 518.

Dains, Frank Burnett, and E. Wertheim, action of ammonia and amines on the substituted carbamides and urethanes. II. Allophanic ester, A., i, 61.

Dakin, Henry Drysdale, amino-acids of gelatin A., i, 66.

Dale, Henry Hallett, and Charles Lovatt Evans, colorimetric determination of the reaction of blood by dialysis, A., i, 142.

See Adolf Windaus. Dalmer, O.

Damiens, A., bromine and chlorine existing normally in animal tissues, A., i, 77.

bromine normally present in animal

tissues, A., i, 476.

the sub-iodide of tellurium, Tel2; the system, iodine-tellurium, A., ii, 110.

the system, iodine-tellurium; study of the vaporisation, A., ii, 257.

tellurium tetraiodide, A., ii, 399.

the system, bromine-tellurium; the nature of tellurium sub-bromide, A., ii, 546.

tellurium sub-bromide, A., ii, 636. Daniel, M. See Th. Sabalitschka.

Daniels, Farrington, and Elmer H. Johnston, thermal decomposition of gaseous nitrogen pentoxide; a unimolecular reaction, A., ii, 249. photochemical decomposition of nitrogen pentoxide, A., ii, 249.

Dardel, Jean Henri. See Jean Piccard. Darke, W. F., James William McBain, and Cyril Sebastian Salmon, ultramicroscopic structure of soaps, A., ii,

Darmois, E., the sodium and ammonium molybdomalates, A., i, 539.

the dispersion of the refraction of hydrocarbons, A., ii, 1.

the specific dispersion of hydrocarbons, A., ii, 361.

Dart, A. E. See Carl L. A. Schmidt. Das, Ananda Kishore, and Brojendra Nath Ghosh, azo-compounds from diketohydrindene, A., i, 896.

Dasannacharya, B., and John Joseph Sudborough, alcoholysis. IV. Alcoholysis of esters of as-unsaturated acids and of the corresponding saturated esters, A., i, 667.

Datta, A. K. See Nilratan Dhar.

Datta, Rasik Lal, and Jagadish Chandra

Bhoumik, halogenation. XX. The replacement of sulphonic acid groups by halogens, A., i, 331.

Datta, Snehamoy, the vacuum arc spectra of sodium and potassium,

A., ii, 285.

spectra of the alkaline-earth fluorides and their relation to each other, A., ii, 529.

variation of resistance of selenium with temperature, A., ii, 570.

Daudt, Herbert Wilkens, the Kjeldahl method, A., ii, 462.

Daudt, Herbert Wilkens. See also Isaac King Phelps.

Dautwitz, W., new micro-combustion furnace for carbon, hydrogen and nitrogen estimations, A., ii, 131.

Dauvillier, A., the L-series of uranium and the principle of combination in

X-ray spectra, A., ii, 421. the principle of combination and the absorption rays in X-ray spectra,

A., ii, 475. the electronic structure of the heavy

atoms and of their spectral lines, A., ii, 669. Dauvillier, A., and Louis de Broglie,

the distribution of the electrons in the heavy atoms, A., ii, 532.

See also Louis de Dauvillier, A.Broglie.

Davenport, Audrey. See Edwin Brown Fred.

David, W. T., internal energy of inflammable mixtures of coal gas and air after explosion, A., ii,

intra-molecular energy during combustion, A., ii, 687.

Davidson, Arthur W. See James Kendall.

Davie, H. W., J. B. S. Haldane, and Ernest Laurence Kennaway, regulation of the blood's alkalinity, A., i,

Davies, Ann Catherine. See Frank Horton.

Davies, William, the cumulative effect of the chlorine atom and the methyl and sulphonyl chloride groups on substitution in the benzene nucleus. and II., T., 853, 876.

Davis, A. R., and Stanley Rossiter Benedict, a crystalline uric acid compound in ox blood, A., i, 633.

Davis, Anne W. See Ivar N. Hultman.

Davis, Oliver Charles Minty, and Frederic William Rixon, chromogenetic properties of sulphur and certain other

properties of supplied and contain other elements, A., ii, 530.

Davis, Tenney L., action of sulphuric acid on dicyanodiamide, A., i, 321.

Davis, Tenney L., David E. Worrall, N. L. Drake, R. W. Helmkamp, and A. M. Young, rôle of mercuric private in the "catchward" sixteen. nitrate in the "catalysed" nitration of aromatic substances. I., A., i,

Dean, Arthur L., and Richard Wrenshall, fractionation of chaulmoogra oil, A., i, 91.

Debierne, André, the diffraction of Xrays by liquids, A., ii, 531.

Débourdeaux, Léon, estimation of arsenic and phosphoric acids in the presence of large amounts of salts. VI. Applications, A., ii, 130.

Debray, R. See M. Loeper.

Decarrière, Eugène, the rôle of gaseous impurities in the catalytic oxidation of ammonia, A., ii, 503, 546.

Deckert, W. See Hermann Thoms. Décombe, the theory of the pile, A., ii,

Decorps, Gaston. See Georges Charpy. Dede, L. See Heinrich Bechhold.

Dehn, Walter. See Karl Kindler. Deiss, Eugen. See Fritz Flade.

Dejean, P., the transformation of iron at the Curie point, A., ii, 573.

Dejust, L., limits of the precipitation of mucin by acids and by zinc salts, A., i, 199.

Dekker, P. See A. van Rossem.

Delauney, P., the extraction of glucosides from some indigenous orchids; identification of these glucosides with loroglossin, A., i, 296.

Delépine, Marcel, active racemic sub-

stances, A., ii, 567.

Delépine, Marcel, Fleury, and Lucien Ville, ββ'-dichlorodiethyl sulphide, A., i, 494.

Delépine, Marcel, and Pierre Jaffeux, two homologues of ethylene sulphide; αβ-thiopropane and thiobutane, A., i, 156.

Della Nave, L. See Guido Cusmano.

Delmas, L. See Ernest Berger.
Demoussy, Em. See Léon Maquenne.
Dempster, A. J., positive-ray analysis of

magnesium, A., ii, 402.

Denham, William Smith, the methylation of cellulose. III. Homogeneity of product and limit of methylation, T., 77.

Deniges, Georges, the microchemical reactions of iodic acid, A., ii, 126.

detection of small quantities of hydrocyanic acid from cyanogenetic glucosides, A., ii, 359.

Denis, Willey, the substitution of turbidimetry for nephelometry in certain biochemical methods of analysis, A., ii, 555.

Denis, Willey, and Warren R. Sisson, the chlorine content of milk and blood after the ingestion of sodium chloride, A., i, 531.

Denis, Willey, and Fritz B. Talbot, calcium in the blood of children, A., i,

Dervin and Olmer, ammoniacal silver carbonate, A., ii, 507.

Derz, H. G. See Jacob Böeseken.

André, dimethylpropyl-Deschamps, carbinol and some of its derivatives, A., i, 89.

Desgrez, Alexandre, and Henri Bierry, nitrogenous equilibrium and carbohydrates of the food ration, A., i, 144.

Desgrez, Alexandre, Guillemard, and Hemmerdinger, the fixation of carbon monoxide diluted and carried along by a current of air, A., ii, 547.

Desgrez, Alexandre, Guillemard, and Saves, the purification of air containing certain toxic gases, A., ii, 107.

Desgrez, Alexandre, and R. Moog, influence of some organic bases and their hydrochlorides on the activity of pancreatic amylase, A., i, 282.

Desmet, G. See Pierre Bruylants.

Desvergnes, Louis, estimation of the composition of ternary mixtures; ether-water-alcohol, A., ii, 600.

Detrie, J. See Gustave Vavon.

Deutsche Gold- & Silber-Scheideanstalt vorm. Rössler, preparation of acetaldehyde from acetylene and steam, A., i, 543.

Deutschmann, W., density and specific rotation of mixtures of liquids with one optically active constituent, A., ii, 146.

Devrient, W., the fate of salicylic acid and some of its derivatives in the organism, A., i, 909.

Dezani, Serafino, occurrence of thiocyanic acid in plants, A., i, 643.

Dezeine, F., absorption by coagulation, A., ii, 88.

Dhar, Nilratan, catalysis. IX. Thermal and photochemical reactions, A., ii, 37.

X. Explanation of some catalysis. abnormally large and small temperature-coefficients, A., ii, 37.
talysis. XII. Some induced re-

catalysis. actions and their mechanism, A., ii,

Dhar, Nilratan [with A. K. Datta and D. N. Bhattacharya], catalysis. VIII., A., ii, 36.

Dhéré, Charles, hæmocyanin. V. Absorption spectrum of oxyhæmocyanin

in the ultra-violet, A., i, 626. Dhéré, Charles, and A. Schneider, reduction of oxyhæmocyanin, and the compound of hæmocyanin with nitric oxide, A., i, 366.

hæmocyanin, A., i, 625.

Dieckmann, Theodor, estimation of titanium in iron and steel, A., ii, 597.

Dieckmann, Walter, the estimation of enols by Hieber's copper acetate method, A., ii, 716.

Diehl, W. See Hans Rupe. Diels, Otto, azodicarboxylic ester as a reagent for the introduction of the hydrazine radicle into the aromatic nucleus. I. Azo-ester and \$\beta\$-naphthylamine, A., i, 280.

Diels, Otto, and Erich Borgwardt, course of the reaction between malononitrile

and nitrous acid, A., i. 548.

Diels, Otto, and Walter Poetsch, course of the reduction of benzylidenediacetylmonoxime and the preparation of benzyldiacetyl, A., i, 675.

Diergart, Paul, date of the discovery of tellurium and bromine, A., ii, 42.

Dietrich, Curt. See Otto Fischer. Dijk, J. C. van. See I. M. Kolthoff.

Dill, D. B., chemical study of (i) certain Pacific coast fishes; (ii) the California sardine (Sardinia cœrulea), A.,

Dilthey, Walther [with G. Bauriedel, B. Burger, G. Geisselbrecht, F. von Ibach, $ar{F}$. Kiefer, A. Seeger, O. Simon, R. Taucher, and J. Winkler], arylated pyridines and their relationships to the corresponding pyrylium compounds. II., A., i, 735.

Dilthey, Walther [with G. Bauriedel, G. Geisselbrecht, A. Seeger, and J. Winkler], pyrylium compounds. VIII.,

A., i, 188.

Dilthey, Walther, and Chr. Bloss, pyrylium compounds. IX. Pyrylium salts with meta-substituents, A., i, 190.

Dilthey, Walther, and B. Burger, pyrylium compounds. X. Violones, A., i, 429.

Dimroth, Otto, mercuration of aromatic compounds, A., i, 697.

Dingle, Herbert, revision of series in the arc spectrum of mercury, A., ii, 668.

Dixon, Henry Horatio, and Nigel G. Ball, a determination, by means of a differential calorimeter, of the heat produced during the inversion of

sucrose, A., ii, 86.
Dixon, Harold Baily, Colin Campbell, and Albert Parker, velocity of sound in gases at high temperatures and the ratio of the specific heats, A., ii,

Dobbie, (Sir) James Johnston, and John Jacob Fox, absorption of light by elements in a state of vapour; the

halogens, A., ii, 566.

Dodd, A. H., guanidine carbonate as a standard alkali, A., ii, 409.

Dodds, E. C., variations in alveolar carbon dioxide pressure in relation to meals, A., i, 284.

Doerinckel, Friedrich, and Max Werner, the specific heat of technical copperzinc alloys at higher temperatures, A., ii, 428.

Doerr, R., oligodynamy of silver. III., A., i, 209.

colloid chemical action of salts of the rare earths and their relationship to the precipitation reaction of the anti-substances, A., ii, 92.

Dohme, Alfred R. L., assay of aconitine, A., ii, 604.

Doisy, Edward A., and Richard D. Bell, the estimation of sodium in blood, A., ii, 413.

Doisy, Edward A., and Emily P. Eaton, relation of the migration of ions between cells and plasma to the transport of carbon dioxide, A., i,

Doisy, Edward A. See also Richard D. Bell.

Dolch, Paul, heat changes in the formation of "nitrolime," A., ii, 17.

Walter.Dommer, See Burckhardt Helferich.

Donard, E. See Ernest Fourneau.

Donleavy, J. J. See Arthur Joseph Hill.

Dore, W. H., proximate analysis of hardwoods; Quercus agrifolia, A., i,

Dornier, O. See Jh. Martinet.

Dorsch, Hans, device for preventing back-flow of water from water-pumps, A., ii, 105.

Dorsey, N. Ernest, a radioactive quantity requiring a name, A., ii, 675.

Doubleday, (Miss) Ida. See Tom Sidney

Doublet, H., and L. Lescœur, urea and nitrous acid, A., ii, 70.

Doughty, Howard Waters, and Benjamin Freeman, trihalogen-methyl reactions. III. The use of the silver cathode in electro-deposition of copper, A., ii, 414.

Dowell, Carr T., and Paul Menaul, nitrogen distribution of the proteins extracted by dilute alkali from pecans, peanuts, kafir, and lucerne, A., i, 644.

Downes, Helen Rupert. See Marie Reimer.

Downey, Thomas B. See Alexander

Dox, Arthur Wayland, and Lester Yoder, spiropyrimidines. I. cycloButane-1:5-spiropyrimidines, A., i, 360. spiropyrimidines. II. cycloHexane-

1:5-spiropyrimidines, A., i, 740.

Doyon, Maurice, use of chloroform for the preparation of active nucleoproteins and nucleic acids in vitro in blood; complexity of the action of nucleic acids in vitro, A., i, 521.

anti-thrombin, a secretion of nuclear origin; the anti-coagulating properties of nucleic acids, A., i, 699.

Dragoïu, J. See E. Fauré-Fremiet. Drake, N. L. See Tenney L. Davis.

Drew, Harry Dugald Keith. See Gilbert Thomas Morgan.

Dreyer, Ferdinand. See Max Bergmann. Driver, John, and James Brierley Firth. the sorption of alcohol and water by animal charcoal, T., 1126.

Droste, D., harmony of the atomic weights and mathematics, A., ii, 101. Druce, John Gerald Frederick, ethyl-

stannic acid and derivatives, T., 758.

Drucker, Carl, dissociation of ternary electrolytes, A., ii, 161.

Drummond, Jack Cecil, and Katharine Hope Coward, vitamin-A. VI. Effect of heat and oxygen on the nutritive value of butter, A., i, 475.

Drummond, Jack Cecil. See also Kather-

ine Hope Coward.

William, Hugo Fricke, and Wilhelm Stenström, absorption of Xrays by chemical elements of high atomic numbers, A., ii, 145.

Duane, William, and R. A. Patterson, the X-ray spectra of tungsten, A., ii,

Dubin, Harry E. See Casimir Funk. Duboin, A., the constitution of smalt, A., ii, 403.

Dubosc, André, estimation of thiocyanate in the presence of salts which precipi-

tate silver nitrate, A., ii, 718.

Dubose, André, and A. Luttringer, preparation of bornyl formate by the action of sodium formate and powdered zinc on solid pinene hydrochloride in the presence of an excess of formic acid, A., i, 115. preparation of bornyl formate by the

action of sodium formate and iron filings on solid pinene hydrochloride in the presence of an excess of formic

acid, A., i, 115.

preparation of bornyl esters and subsequently of camphor from oil of turpentine, propionic acid, and an alkaline peroxide, A., i, 115.

preparation of the bornyl esters of propionic, butyric, and valeric acids,

A., i, 115.

the preparation of camphor from oil of turpentine by means of salicylic acid and an alkaline peroxide, A., i, 116.

Dubosc, André. See also A. Luttringer. Duboux, Marcel, and Léon Cuttat, solubilities of some active and racemic tartrates and malates, A., i, 763.

Dubovitz, Hugo, alteration of sodium carbonate in air, A., ii, 639.

Dubrisay, René, action of boric acid on glyceroland the multivalent alcohols; application of a new physico-chemical volumetric method, A., i, 535.

miscibility of phenol and some mineral solutions; analytical applications A., ii, 282.

physico-chemical volumetric analysis, A., ii, 344.

Dubsky, J. V. See Hilmar Johannes Backer.

Duclaux, J., cellulose and its esters. II. Stability and viscosity of cellulose nitrates, A., i, 545.

Duclaux, J., and P. Jeantet, absorption spectrum of oxygen, A., ii, 613.

Duclaux, J. See also A. Lanzenberg. Duclaux, (Mme.) J. See René Wurmser. Dudley, Harold Ward, aminoacylcholine esters. I. Glycylcholine, T., 1256.

Dudley, Harold Ward, and Charles Locatt Evans, the preparation and recrystallisation of oxyhæmoglobin, A., i. 749.

Duff, James Cooper, complex metallic V. cis-Succinatodiethylammines. enediaminecobaltic salts, and other cobaltammine salts containing a seven-membered ring in the complex, T., 385.

complex metallic ammines. VI. cis-Phthalato-, cis-homophthalato- and other diethylenediaminecobaltic

salts, T., 1982.

Dufraisse, Charles, ethylenic isomerism of the ω-brominated styrenes, A., i, 17, 104.

the so-called true dibenzovlmethane of J. Wislicenus, A., i, 114.

auto-oxidation of a-bromostyrene, A., i, 168.

Dufraisse, Charles. See also Charles Moureu.

Dufton, Arthur Felix, the separation of miscible liquids by distillation, T.,

1988; A., ii, 302. Duin, C. F. van, the sensitiveness of hexanitrodiphenyl to mechanical influences compared with that of hexanitro-compounds \mathbf{of} similar constitution, A., i, 19.

the identification of sulphonic acids in the state of their salts formed with aromatic bases, A., ii, 221.

Duin, C. F. van. See also Hugo Rudolph Kruyt.

amesnil, Philippe, ethyl hydrogen diethylmalonate, A., i, 391. Dumesnil,

Dunnicliff, Horace Barratt, and Gerald Snowden Butler, sulphate, T., 1384. ethyl hydrogen

Dunnill, Sydney, overvoltage. Part I. A comparison of the methods of determination, especially as applied to the mercury cathode, T., 1081.

Dunoyer, Louis, a new spectrum of exsium, A., ii, 529.

induction spectrum of rubidium, A., ii, 610.

Dupont, Georges, the acid constituents of the gem of the pine; d- and l-pimaric acids, A., i, 487.

the acid constituents of the resin of the maritime pine, A., i, 510.

the acid constituents of the resin of the maritime pine; isomerisation of the pimaric acids, A., i, 510. Dupré, F. H., and Percy Vivian Dupré,

reactions of mercury fulminate with sodium thiosulphate, A., i, 232.

Dupré, Percy Vivian. See F. H. Dupré. Dupuy. See Paul Pascal.

Dupuy, Eugène L., influence of forging on the electrical resistance of steel, A., ii, 481.

Durand, J., action of the alkali metals on the ethers, A., i, 89.

decomposition of some metallic alkyloxides and phenoxides by heat, A., i, 492.

Dushman, Saul, a theory of chemical reactivity; calculation of rates of reactions and equilibrium constants, A., ii, 315.

Dutcher, R. Adams, H. M. Harshaw. and J. S. Hall, the effect of heat and oxidation on the antiscorbutic vitamin, A., i, 839.

Dutoit, P. See August L. Bernoulli.

Dutt, Pavitra Kumar, Hugh Robinson Whitehead, and Arthur Wormall, the action of diazo-salts on aromatic sulphonamides, Part I., T., 2088.

Dutt, Sikhibhushan. See Edwin Roy Watson.

Dye, Marie. See Katharine Blunt. Dziewoński, Karol [with Z. Lemberger, J. Podgórska, and J. Suszka], three new hydrocarbons, leucacene, rhodacene, and chalkacene, A., i, 105.

Dzrimal, Johanna. See Alois Zinke.

E.

Eakle, Arthur Starr, jurupaite, a new mineral, A., ii, 702.

Eastland, C. J. See Charles Edwin Corfield.

Eaton, Emily P. See Edward A. Doisy. Eberhard, August, methyl-red as indicator in the estimation of alkaloids, A., ii, 225.

Eberlein, W. See Walther Borsche. Eberstadt, Otto. See Emil Knoevenagel. Ebler, Erich, and A. J. van Rhyn, the opening up of earths poor in radium, A.,ii, 616.

Eck, Pieter Noach van, detection of blood in fæces, A., ii, 472.

Eckert, Alfred, pentabromobenzene, A., i, 854.

octachloroanthraquinone, A., i, 870.

Eckert, Alfred, and Gertrud Endler, derivatives of 2-methylanthraquinone, A., i, 871.

Eckert, Alfred, and F. Seidel, replaceability of the halogen in halogensubstituted phthalic acids, A., i, 862.

Eckert, G. See Fritz Arndt.

Eckweiler, Herbert, Helen Miller Noyes, and Kaufman George Falk, the amphoteric properties of some amino-acids and peptides, A., i, 316.

Eddy, N. B., internal secretion of the

spleen, A., i, 906.

Eddy, Walter H., Hattie L. Heft, Helen C. Stevenson, and Ruth Johnson, vitamin content. II. The yeast test as a measure of vitamin-B, A., i, 758.

Edie, Edward Stafford, digestion of fibrin and caseinogen by trypsin, A., i, 750.

Edlbacher, Siegfried, the free aminogroups of the proteins. II. and III., A., i, 136, 199.

Edminster, Floyd H., and Hermon C. Cooper, chemistry and crystallography of some fluorides of cobalt, nickel, manganese, and copper, A., ii, 115.

Edwards, Junius David, and T. A. Moormann, density of aluminium from 20° to 1000°, A., ii, 114.

Effront, Iwan. See Friedrich Kehrmann. Ege, Rich., physiology of the blood sugar. V. How is the partition of dextrose between the red corpuscles and the outside fluid to be explained? A., i, 285.

Ege, Rich., and Valdemar Henriques, the dextrose content of arterial and venous blood from muscle, A., i, 905.

Eggert, John, velocity of chemical reactions, A., ii, 442.

Eggert, John, and B. Scharnow, Landolt's reaction. II. Some reactions analogous to the Landolt reaction, A., ii, 686.

lecture experiments on the kinetics of reactions in solutions (applied to the Landolt reaction), A., ii, 691.

Eggert, Sophie. See Carl Tubandt. Egnér, Hans, viscosity and flocculation of coarse suspensions, A., ii, 382.

Ehlers, Walther, and Peter Paul Koch, action of light on silver bromide. I., A., ii, 289.

Ehn, Marie. See W. C. Thro.

Ehrhardt, Alfred. See Emil Fromm. Ehrhardt, Udo. See Franz Fischer.

Einbeck, Hans, and Ludwig Jablonski, 2:4:6-trinitroresorcinol [styphnic acid], A., i, 505.

Einstein, Albert, theory of the viscosity of heterogeneous systems, A., ii, 19. motion of sound in partly dissociated

gases, A., ii, 249.

Eisenhardt, W., quantitative estimation of blood sugar with the aid of methyl-

ene-blue, A., ii, 283.

Eisenlohr, Fritz, the molecular refraction coefficient, its additivity character and its use for determining con-II. The calculation of stitution. refractive indices of aromatic hydrocarbons, A., ii, 1.

the molecular refraction coefficient, its additivity and its use for determining constitution. III. Numerical relationships in the series of polymethylene compounds, A., ii, 229.

Ekholm, K. E. See Ossian Aschan. Elam, Constance F. See Henry Cort

Harold Carpenter.

Elbers, W. E. See Kurt Heinrich Meyer. Elbs, Karl, and P. Neher, stability of persulphates, A., ii, 693.

Eliasberg, Paul. See S. Kostychev.

Eller, Wilhelm, synthetic and natural

humic acids, A., i, 506. Ellinger, Philipp, the mechanism of the formation of methæmoglobin through acetanilide and its derivatives, A., i, 135.

Elliott, Felix A., and Samuel Edward Sheppard, the gold number of commercial gelatins, A., ii, 720.

See also Samuel Elliott, Felix A. ${\it Edward}$ Sheppard.

Ellis, C. D., magnetic spectrum of the

B-rays excited by γ-rays, A., ii, 422. Elsey, Howard McKee, conductivity and viscosity of solutions in dimethylamine, trimethylamine, ethylamine, diethylamine, triethylamine, and propylamine, A., ii, 79.

Embden, Gustav, a gravimetric method of estimation of small amounts of

phosphoric acid, A., ii, 462.

Embden, Gustav, and Erich Adler, distribution of phosphoric acid in the white and red musculature of the rabbit, A., i, 529.

Embden, Gustav, and Eduard Grafe, influence of muscular work upon excretion of phosphoric acid, A., i, 529.

Embden, Gustav, Eduard Grafe, and Ernst Schmitz, raising of the capacity for work by administration of phosphate, A., i, 529.

Embden, Gustav, and Salo Isaac, influence of phosphorus poisoning on the lactacidogen content of rabbit's muscle, A., i, 529.

Embden, Gustav, and Fritz Laquer, chemistry of lactacidogen. III., A.,

i, 528.

Embden, Gustav, Ernst Schmitz, and Peter Meincke, influence of muscular work on the lactacidogen content of striped muscle, A., i, 528.

Emery, William O., estimation of salicylates and phenol, A., ii, 603.

Emmert, Bruno, and Rudolf Buchert, compounds of pyridine with the alkali metals. IV., A., i, 268.

Emmert, Bruno, and Ernst Meyer, action of γ -bromovaleric acid on amines, A., i, 268.

Emslander, R. See Alexander Gutbier. Endler, Gertrud. See Alfred Eckert. Engel, Erwin. See Hartwig Franzen. Engeland, R., carnitine, A., i, 880.

Engelhardt, Wilhelm. See Wilhelm

Stepp.

Engelmann, W., mechanism of action of Becquerel rays on the function of cells, A., i, 526.

Engelson, Hugo, the estimation of very small quantities of arsenic in urine, blood, and other body fluids, and the arsenic balance in the silver salvarsan treatment, A., ii, 59.

Engfeldt, N. O., the oxidation of aceto-

acetic acid, A., i, 158.

Englert, F. See Alfred Heiduschka.

Ephraim, Fritz, complex compounds of thiocyanates and arsenious acid, A., i, 15.

solubility. IV. Ammines of salts of picric acid and of p-dichlorobenzenesulphonic acid, A., i, 339.

solubility. V. Solubility of salts of aromatic acids and their ammines, **A**., i, 508.

solubility. I., A., ii, 305.
Ephraim, Fritz, and Eduard Michel, metallic hydrides. I. Alkali hydrides, A., ii, 638.

Ephraim, Fritz, and Paul Mosimann, solubility. II. Polyiodides of ammines, A., ii, 338.

solubility. III. Compounds derived from ammines and bismuth or mercury iodides, A., ii, 339.

Ephraim, Fritz, and Franz Müller, the nature of subsidiary valencies. XXV. Stability of complex kations with varying magnitude of anions, A., ii, 455.

Erdmann, W. See Th. Sabalitschka. Erlich, Joseph, new physico-chemical law; the law of variability, A., ii, 580.

Ernst (Frl.) Ilse. See Erich Müller.

Ero. See Paul Pascal.

Eschbaum, Friedrich, new stalagmometer or guttameter, A., ii, 489.

Ettisch, Margarete. See Fritz Ullmann. Euler (Mme.), Astrid Cleve von, condensations between carbonyl compounds and resorcinol (or orcinol) or phloroglucinol, A., i, 563.

the constitution of cellulose and cellobiose, A., i, 769.

relation to lignin of crude resin and tannic acid in spruce needles, A., i,

Euler, Hans von, enzyme formation by Penicillium glaucum, A., i, 482.

Hans von, and Arvid Hedelius, calculation of the diffusion constant of dissolved substances, A., ii, 170.

adsorption by powdered metals. A., ii, 490.

Euler. Hans von, and S. Heintze, the susceptibility of the fermentation of a top yeast to the hydrogen ion concentration, A., i, 149.

Euler. Hans von, and Ingvar Laurin, adaptation of a yeast to galactose, A., i, 642.

measurements of the maximal stability of organic compounds. I., A., ii, 498.

Euler, Hans von, Ingvar Laurin, and A. Pettersson, the adaptation of a top yeast to a galactose fermentation medium, A., i, 386.

Euler, Hans von, and Olof Svanberg, toxic actions in enzymic processes. II. The inactivation of saccharase (invertase) by organic substances, A., i, 68.

toxic actions in enzymic processes.

IV. Electromotive measurements of the combination of silver and copper with saccharase and other organic compounds, A., i, 202.

preparation of highly active saccharase (invertase) preparations. V. Phosphorus content of purified saccharase solutions after exhaustive dialysis, and the micro-estimation of phosphorus, A., i, 522.

characterisation of amylase solutions, A., ii, 528.

Euler, Hans von. See also Olof Svan-

Bernard Scott, estimation of small quantities of chromium in steels, A., ii, 279, 562.

Evans, Charles Lovatt, the regulation of the reaction of the blood, A., i, 904.

a probable error in estimations by means of the hydrogen electrode, A., ii, 271.

Evans, Charles Lovatt. See also Henry HallettDale and Harold Ward Dudley.

Evans, E. See John Cunningham McLennan.

Everest, Arthur Ernest, and Archibald John Hall, anthocyanins and anthocyanidins. IV. Observations on (a)anthocyanin colours in flowers, and (b) the formation of anthocyanins in plants, A., i, 485.

Evers, Fritz. See Carl Dietrich Harries. Evers, Norman, titration of certain

alkaloids, A., ii, 527. colorimetric method of estimating hydrogen-ion concentration. Some applications in the analytical laboratory, A., ii, 705.

Ewan, Thomas, and John H. Young, preparation of guanidine salts and of nitroguanidine, A., i, 500.

Ewbank, (Miss) Elinor Katharine. Nevil Vincent Sidgwick.

Ewing, Clare Olin. See Arno Viehoever.

Ewing, (Sir) J. Alfred, molecular energy in gases, A., ii, 299.

Ewing, Warren W. See William Draper Harkins.

F.

Faber, Alfred. See Ernst Hermann Riesenfeld.

Fabriques de Produits Chimiques de Thann et de Mulhouse, preparation

of borneol, A., i, 425.
Färber, E., F. F. Nord, and Carl Neuberg, phytochemical reduction of acetol with the production of optically active propylene glycol; presence and utilisation of racemic substances in the animal and plant organisms, A., i, 150.

Fahrion, Wilhelm, colophenic acid, A., i, 792.

Faillebin, M., some minimum boilingpoint mixtures, A., i, 494.

Fairbourne, Arthur, the o-dimethylanthraquinones and their derivatives, T., 1573.

Fairbourne, Arthur, and Harold Toms, a-monosodium glyceroxide; structure and application, T., 1035. a new synthesis of oxazines, T., 2076.

Fairchild, John G., analysis of mineral

sulphide water, A., ii, 126.
Fajans, Kasimir, and K. von Beckerath, surface forces with hetero-polar crystal lattices; adsorption of lead isotopes by colloidal silver haloids, A., ii, 386.

Fajans, Kasimir, and H. Grimm, the molecular volumes of the alkali haloids,

A., ii, 168.

Fajans, Kasimir, and Karl F. Herzfeld, size of the ions and lattice energy of the alkali haloids, A., ii, 174.

Falch, Max, preparation of maltose, A., i, 161.

Falciola, Pietro, sensitive reaction for

copper, A., ii, 711.

Falcke, Victor, the reaction between ferrous oxide and carbon and between IV., A., carbon monoxide and iron. ii, 511.

Ferdinand. Alexander Falco, Gutbier.

Fales, Harold A., and William A. Mudge, saturated potassium chloride calomel cell, A., ii, 79.

Falk, Kaufman George. See Herbert Eckweiler.

Falkov, M. See George W. Raiziss.

Falta, W., and M. Richter-Quittner, the chemical composition of blood corpuscies, A., i, 285.
prin clotting. II. The combined

fibrin clotting. chlorine in the blood, A., i, 380. the so-called oligodynamic action of

the heavy metals and of the salts of the heavy metals, A., ii, 335.

Farbenfabriken vorm. Friedrich Bayer & Co., preparation of alkyliminodisulphonic acids, A., i, 316.

preparation of lævulose-monophosphoric acid, A., i, 498.

preparation of ar-a-tetrahydronaphtholearboxylic acid, A., i, 567. preparation of nitro-derivatives of

 β -azides of the anthraquinone series, A., i, 747.

Farbwerke vorm. Meister, Lucius, & Brüning, manufacture of pyridine bases, A., i, 52, 354. improved manufacture of methane,

A., i, 297.

preparation of aurothiosalicylic [oaurothiolbenzoic] acid, A., i, 510. preparation of arsenic compounds of

the pyrazolone series, \mathbf{A} ., i, 752. Fargher, Robert George, arylazoglyoxalinecarboxylic acids, T., 158.

Fargher, Robert George, and Harold King, additive compounds of antipyrylaminodiacetic acid and its salts with neutral salts, T., 292.

Fargher, Robert George, and William Henry Perkin, jun., m-opianic acid (4:5-dimethoxy-o-aldehydobenzoic

acid), T., 1724.

Fargher, Robert George, and Frank Lee Pyman, 4- β -n oxaline, T., 734. 4-β-methylaminoethylgly-

Farmer, Ernest Harold, and Christopher Kelk Ingold, the conditions underlying the formation of unsaturated and cyclic compounds from halogenated open-chain derivatives. III. Products derived from halogenated

glutaconic acids, T., 2001.

Fauré-Fremiet, E., J. Dragoïu, and (Mllc.) du Vivier de Streel, a microchemical reaction of pulmonary epi-

thelial tissue, A., ii, 228.

Fauré-Fremiet, E. See also (Mme.) Z. Gruzewska.

Fawsitt, Charles Edward, and Christian H. Fischer, the miscibility of liquids, A., ii, 307.

Fazi, Remo de, new reaction of aldehydes. II., A., i, 568.

colour reaction of indones, A., ii, 357. Fehrle, Karl, a new periodic relationship between the atomic weights of the chemical elements. V. Calculation of Rydberg's constant, A., ii, 188.

Feigl, Friedrich, and Rosa Stern, use of spot reactions in qualitative analysis,

A., ii, 278.

Feigl, Johann, presence of phosphates XÎ. Hyperin human blood. phosphatæmia and "salt retention" in Morbus brightii, A., i, 73.

presence of phosphates in human XII. The phosphorus disblood. tribution according to the known methods of separation and isolation, A., i, 143.

observations on the question of the residual reduction of the blood,

A., i, 143.

cholesterolanæmia. I. Comparative investigations of [analytical] methods with particular reference to colorimetric processes, A., ii, 220. non-protein nitrogen of human blood.

II. [The satisfactory estimation of the urea fraction], A., ii, 359.

Feilberg, See Harald Niels.Christensen.

Feist, Karl, and Richard Schön, the tannin of oak bark, A., i, 117.

Feld. Hans. See Ernst Hermann Riesenfeld.

Felix, B. B. C. See Jacob Böeseken.

Felix, Walter. See Kurt Heinrich Meyer.

Fellenberg, Theodore von, a volumetric method for estimating several sugars in the presence of each other, A., ii, 136.

Felsher, H. See Harold Cornelius Bradley.

Felton, Lloyd D., colorimetric estimation of hydrogen-ion concentration of small amounts of fluid, A., ii,

Fenger, Frederic, and Mary Hull, the effect of age on pancreatic enzymes, A., i, 527.

Fenn, Wallace O., phagocytosis of solid particles. III. Carbon and quartz, A., i, 640.

Ferla, J. See P. Karrer.

Fernández, Obdulio, oxydases; the Bach-Chodat system, A., i, 485.

Fetkenheuer, Bruno, action of sodium amalgam on carbon tetrachloride, A., ii, 547.

Feuillié, E. See Ch. Achard.

Feulgen, R., a complex nucleic acid, A., i, 76.

new methods for the preparation of nucleic acids, A., i, 136.

preparation of spongy platinum, Ā., ii, 266.

lecture experiment; reduction of oleic acid to stearic acid, A., ii, 448.

Fichter, Fritz, electrical conductivity of arsinic acids, A., i, 628.

Field, Ada M., a method of purifying certain kinds of proteins, A., i, 366.

Field, (Miss) Ellen, mitragynine and mitraversine, two new alkaloids from species of Mitragyne, T., 887.

Fielding, William R., polymerisation in the solid state; polymerisation amongst liquids, A., ii, 487.

Fierz, Hans Eduard, and Hans Brütsch, purpuric acids, A., i, 419. Fierz, Hans Eduard, and Fritz Schmid, Hansexhaustive sulphonation of naphthalene, A., i, 409.

Fiesel, Hermann, experimental investigation of the point of inflammation and the velocity of reaction of a hydrogen oxygen mixture, A., ii,

Filippi, Eduardo, "salbrantin"; intraorganic behaviour of halogenated aromatic compounds, A., i, 146.

Finckh, E. R. O., can the chloridion of Ringer solution be replaced by other ions with the beating frog's heart ? A., i, 830.

Findlay, Alexander, and William Thomas, influence of colloids on the rate of reactions involving gases. Decomposition of hydroxylamine in the presence of colloidal platinum, T., 170.

Findlay, George Marshall, glyoxalase in avian beriberi, A., i, 478. inkelstein, J. L. See R.

Finkelstein, Wilhelm.

Finndorf, Friedrich. See Karl Kindler.

Firth, James Brierley, some factors governing the sorptive capacity of charcoal; sorption of ammonia by cocoa-nut charcoal, T., 926.

the sorption of hydrogen by amorphous palladium, T., 1120.

sorption of iodine by carbon, A., ii, 382.

Firth, James Brierley. See also John Driver.

Fischer, Anna von, investigation of the viscosity of cellulose acetates, A., i,

Fischer. Christian H. See Charles Edward Fawsitt.

Fischer, Emil, allyl-β-glucoside, A., i,

Fischer, Emil, Max Bergmann, and Arthur Rabe, acetobromorhamnose and its application in the synthesis of rhamnosides, A., i, 94.

Fischer, Franz, the preparation of artificial diamonds, A., ii, 111.

Fischer, Franz, and Udo Ehrhardt, thermal decomposition of phenoxides, A., i, 412.

Fischer, Franz, and Georg Pfleiderer, thermo-elements. II. The thermoelectric power of antimony-cadmium alloys of about 50 atomic per cent., A., ii, 296.

Fischer, Franz, and H. Schrader, the formation and chemical structure of coal, A., ii, 210.

Fischer, Hermann O. L. [with Gerda Anger, Heinrich Baerwind, and Heinrich Ohlendorf], new derivatives

of quinic acid, A., i, 419.

Fischer, Otto, A. Balling, and R.

Aldinger, action of furfuraldehyde on primary aniline bases and aromatic

amino-acids, A., i, 22.

Otto, Weiss, Curt Dietrich, and Fischer, Friedrich formation naphthiminazoles from 1-nitroso-2alkylnaphthylamines, A., i, 57.

Fischer, Otto, and Ludwig Grahl, "furol green," A., i, 42.
Fischer, Otto, and Günter Scheibe,

quinocyanines. II., A., i, 56.

Fischer, Otto, Günter Scheibe, Paula Merkel, and R. Müller, 2:4-dimethylquinoline, 4-phenyl-2-methylquinoline, and 2:4:6-trimethyl-quinoline, A., i, 55.

Fischer, Robert, viscosimeter, A., ii, 382.

Fisher, E. A., soil reaction. I. A résumé, A., i, 215. soil reaction. II. The colorimetric

soil reaction. II. The colorimetric determination of the hydrogen-ion concentration in soils and aqueous soil extracts, A., ii, 349.

Fisher, Harry Linn, and Harold Lester Simons, methyl tartronate, A., i,

303.

Fishman, Jacob B., the condensation of formaldehyde with o-nitrophenol, A., i, 23.

some derivatives of 3-nitro-4-hydroxy-

benzyl alcohol, A., i, 23.

Fiske, Cyrus H., estimation of inorganic phosphate in urine by alkalimetric titration, A., ii, 411.

estimation of inorganic sulphate, total sulphate, and total sulphur in urine by the benzidine method, A., ii, 556.

Fittipaldi, Emil Hugo, a new rapid method for detecting albumoses and peptones in urine, A., ii, 419.

Flade, Friedrich, H. Scherffig, and Eugen Deiss, ultramicroscopic investigation of manganous arsenate jellies, A., ii, 510.

Fleck, Alexander. See Thomas Wal-

lace.

Fleischer, Karl, estimation of fermenta-

tion glycerol, A., ii, 714.

Fleischer, Karl [with Walter Wolfgang Melber, and Johann Stemmer], synthesis of indanediones. VII., A., i, 251.

Fleischer, Karl, and Fritz Siefert, synthesis of indanediones. IX. Action of substituted malonyl chlorides on partly hydrated aromatic hydrocarbons, A., i, 254.

synthesis of indanediones. X. Pericyclic derivatives of acenaphthene,

A., i, 255.

Fleischer, Karl, and Johann Stemmer, synthesis of indanediones. VIII. Indanedione derivatives of thianthren, A., i, 264.

Fleming, Alexander, and Francis J. Clemenger, simple method for the automatic registration of production of gas by bacteria in cultures and of the absorption of oxygen by aerobic bacteria which do not form gas, A., i, 207.

Fletcher, (Sir) Lazarus, obituary notice of, T., 547.

Fletcher, (Sir) Lazarus [with George Thurland Prior], meteoric stone of Crumlin, Co. Antrim, A., ii, 408.

Fleury. See Marcel Delépine.

Fleury, Paul, the catalytic decomposition of an alkaline solution of sodium hypobromite by copper sulphate; antagonistic action of iodine, A., ii, 70.

Flink, Gust., trigonite and dixenite, two new minerals from Långban, Sweden, A., ii, 268.

Flintzer, S. See H. Strohmann.

Florence, Gabriel. See Louis Hugounenq. Florentin, Daniel, estimation of phosphates in waters, A., ii, 707.

Florentin, Daniel, and Henri Vandenberghe, criticism of the methods of estimating small amounts of carbon monoxide in air and in flue gases, A., i, 276.

Florentin, Daniel. See also André Kling.

Flürscheim, Bernhard Jacques, some properties of tetranitroaniline (TNA), A., i, 504.

Flury, Ferdinand. See Alexander Gutbier.

Fodor, Andor, colloidal condition of the proteins in yeast extracts. I. Yeast extract proteins in alkaline solution; relationship to biological processes, A., i, 81.

colloid chemical basis of the kinetics

of fermentation, A., ii, 27.

colloidal condition of the proteins in yeast extract. II. Yeast phosphorus proteins in the sol condition as colloid ferments, A., i, 701.

Fodor, Andor. See also Emil Abderhalden.

Foerster, Fritz, sodium perborate, A., ii, 506.

Foerster, Fritz, and D. Aanensen, electro-analytical separation of copper, antimony, and tin, A., ii, 350.

Försterling, K., Bohr's atomic model and the theory of relativity, A., ii, 189.

Fonda, Gorton R. See Arthur Beckett Lamb.

Fontès, G., and L. Thivolle, microestimation of dextrose by means of potassium permanganate; application to blood and cerebro-spinal fluid, A., ii, 563.

Foote, Harry Ward, equilibrium in the system, ammonia-water-ammonium thiocyanate, A., ii, 441.

Foote, Harry Ward, and Stuart R. Brinkley, equilibrium in the system, ammonia-ammonium nitrateammonium thiocyanate, A., ii, 441. method of producing dry ammonia, A., ii, 448.

Foote, Paul D. See F. L. Mohler. Footitt, Frank F. See Edward Wight

Washburn.

Forerand, Robert de, the melting point of heptane and the law of alternance of melting points, A., ii, 85.

Formhals, R., new titrimetric estimation

of hyposulphite, A., ii, 58.

Fornasir, Virgilio. See Leopold Ruzicka. Forsén, L., system and constitution of derivatives of molybdic acid. and II., A., ii, 205, 265.

system and constitution of complex derivatives of the molybdic acids,

A., ii, 340.

Forster, Martin Onslow, and William Bristow Saville, studies in the camphane series. XXXIX. p-Aminophenylaminocamphor (camphoryl-p-phenylenediamine), T., 789. Foshag, William F., plazolite, a new

mineral, A., ii, 270.

Foshag, William F. See also Edgar

Theodore Wherry.

Fosse, Robert, synthesis of cyanic acid by oxidation of formamide and oxamic acid, A., i, 165.

synthesis of cyanic acid by oxidation of organic substances; new methods of detecting the substance, A., i, 321.

Fosse, Robert, and G. Laude, synthesis of cyanic acid and carbamide by oxidation in ammoniacal solution of alcohols, phenols, and aldehydes, **A**., i, 321.

syntheses of cyanic acid and carbamide by oxidation of ketones, acids, and amines in presence of ammonia, A.,

i, 500.

syntheses of cyanic acid and of carbamide by oxidation of organic substances; amides, nitriles, and methylcarbylamine, A., i, 652.

Fosse, Robert, and (Mlle.) N. Rouchel-

man, the formation of carbamide in the liver after death, A., i, 382.

Foster, Dorothy Lilian, and Dorothy Mary Moyle effect of exposure to low temperatures on some physiological, chemical, and physical properties of amphibian muscle, A., ii, 637.

Fouque, Gaston, dicyclohexylamine and cyclohexylaniline, A., i, 555.

Fourneau, Ernest, local anæsthetics, A., i, 548.

Fourneau, Ernest, and E. Donard, iodine monochloride, A., ii, 584.

Fourneau, Ernest, and A. González, separation of \(\beta\)-aminoethyl alcohol from mixtures containing choline, A., i, 546.

Fourneau, ourneau, Ernest, (Mlle.) Montagne, and José Puyal, hypnotics. II. Derivatives of cyclohexanecarboxylic acid, A., i, 566.

Fournier, Louis, and L. Guénot, treatment of syphilis by bismuth, A., i, 908.

Fowler, Gilbert John, Jal D. Edal Behram, S. N. Bhate, K. Habib Hassan, S. Mahdihassan, and N. N. Inuganti, bio-chemistry of the mahua flower, A., i, 152.

Francis William. Fox, See John

Addyman Gardner.

Fox, John Jacob. See (Sir) James Johnston Dobbie.

Fränkel, Sigmund, and Gino Meldolesi, the relation of pressure and temperature to enzyme action; the influence of pressure on the velocity of peptic, tryptic, and diastatic hydrolysis, A., i. 381.

Fränkel, Sigmund, and Erik Schwarz, the water-soluble vitamin and the substances accelerating fermentation. I. A method for the estimation and the preparation of a substance from yeast and rice polishings which accelerates fermentation, A., ii, 228.

Fraenkel, Walter, and H. Houben, diffusion velocity in solid gold-silver mixed crystals and the diffusion coefficient of gold in silver at 870°, A.,

ii, 491.

Franchimont, Antoine Paul Nicholas, and Hilmar Johannes Backer, a-sulphopropionic acid and its acid salts, A., i, 9.

the stereoisomeric components of α-sulphopropionic acid, A., i, 93.

Franck, J., and P. Knipping, potential of excitation of helium, A., ii, 150. Franco, C. See Umberto Sborgi.

François, Maurice, and Ch. Lormand, an arrangement of a microscope for the examination of opaque crystals, A., ii, 493.

method of photographing transparent

crystals, A., ii, 626.

Franzen, Hartwig, chemical constituents of green plants. XII. Volatile constituents of oak leaves, A., i, 644.

Franzen, Hartwig, and Erwin Engel, influence of substituents on reactions. VI. Nitration of substituted acetanilides, A., i, 713.

Franzen, Hartwig, and Fritz Helwert, the method of Witt and Utermann for the separation of o- and p-nitroacetanil-

ides, A., i, 714.

Franzen, Hartwig, and Irene Rosenberg, influence of substituents on reactions. I. Influence of chlorine and bromine on the velocity of interaction of benzyl chloride with sodium ethoxide, A., i, 233.

Hartwig, \mathbf{a} nd ArturFranzen, Schneider, separation of aliphatic amines from one another and from ammonia, A., ii, 663.

Franzen, Hartwig, and Paul Steinführer, aminohydrazines. VI. Acetophenonep-aminophenylhydrazone and p-amino-

phenylhydrazine, A., i, 463.

Franzen, Hartwig, Adolf Wagner, and Artur Schneider, the chemical constituents of green plants. XIII. On the volatile basic substances of green plants, A., i, 838.

Fraser, Chas. G., the action of methylene-blue and certain other dyes on living and dead yeast, A., i, 293.

methylene-blue as indicator in determining the toxicity of phenol and phenol-salt solutions towards yeast, A., i, 293.

Frazer, Joseph Christie Whitney. Benjamin Franklin Lovelace.

Fred, Edwin Brown, and Audrey Davenport, the effect of organic nitrogenous compounds on the nitrate-forming organism, A., i, 532.

See also C. F. Fred, Edwin Broun. Arzberger, and W. H. Peterson.

Freed, E. Stanley. See Charles L. Burdick.

Freeman, Benjamin. See Howard

Waters Doughty.

Freise, R., the behaviour of some derivatives containing pyrimidine sulphur in the animal organism, A., i, 207.

See Fritz Mayer. Freitag, Karl.

Fréjacques, M. See Camille Matignon. Frellstedt, K. See Karl Fries.

Frellstedt, R. See Karl Fries.

French, H. E., and Roger Adams, the reaction between acid haloids and aldehydes. II., A., i, 342.

Frenkel, carbon dioxide as a fertiliser,

A., i, 703.

Frese, Wilhelm, passivity and photo-electricity, A., ii, 569.

Fresenius, Ludwig. See Otto Lemmer-

Fresenius, Wilhelm, and Leo Grünhut, estimation of sugar in wine, A., ii, 221.

Fresenius, Wilhelm, and Leo Grünhut, detection and estimation of salicylic acid in wine, A., ii, 602.

Freudenberg, Ernst, and Paul György the fixation of calcium by animal tissues. II., A., i, 382.

Freudenberg, Karl, cellulose, A., i, 400.

catechin, A., i, 577.

Freudenberg, Karl, Otto Böhme, and Alfred Beckendorf, tannins and similar substances. VII. Stereoisomeric catechins, A., i, 576.

Freudenberg, Karl, and Hans Walpuski, tannins and similar substances. The tannin of the edible chestnut, A., i, 799.

Freund, Else. See Edmund Speyer.

Freund, Helmuth. See Edmund Speyer. Freund, Julius, estimation of carbon dioxide in air, A., ii, 348.

Freund, Liselotte. See Edmund Speyer. Freund, Martin, and Edmund Speyer [with Ernst Guttmann], the reduction products of thebaine, A., i.

Freund, Walter. See Edmund Speyer. Freundlich, Herbert, and Alexander Nathansohn, photo-sensitiveness of arsenic trisulphide sols, A., ii, 494. chemical reactions in mixtures of sols, A., ii, 536.

Frey, L. See S. Kostychev.

Freyer, Wilhelm. See Karl Andreas Hofmann.

Fric, R., the stability of powders containing cellulose nitrates, A., i, 650.

Fricke, Hugo, the K-characteristic absorption frequencies for the chemical elements magnesium to chromium. A., ii, 6.

Fricke, Hugo, and Theodore Lyman, spectrum of helium in the extreme ultra-violet, A., ii, 362.

Fricke, Hugo. See also William Duane. Fricke, K., solidifying rate of paraffins, A., ii, 659.

Fricke, Robert, thermo-kinetic explanation for the reciprocal attraction of colloidal particles (a possibility of explaining gravitation), A., ii, 387.

Friederich, Walter, preparation of tri-

nitroresorcinol, A., i, 505.

Friedländer, Paul, the reaction of naphthols and naphthylamines with bisulphite, A., i, 443.

Friedrich, Alfred. See Alois Zinke. Friedrichs, Fritz, melting point apparatus, A., ii, 238.

ammoniates as binary systems. A., ii, 503.

29

Friend, John Albert Newton, a colloid theory of the corrosion and passivity of iron, and of the oxidation of ferrous salts, T., 932.

electrochemical conceptions of valency, T., 1040.

Fielding's formula connecting critical temperatures and pressures, A., ii,

Fries, Karl [with K. Frellstedt], acetylnaphthols [hydroxynaphthyl methyl ketones], A., i, 423.

Fries, Karl, and R. Frellstedt, benzocoumaranones [naphthafuranones], A., i, 431.

Fries, Karl, and W. Hartmann, degradation reactions in the anthraquinone series, A., i, 256.

Fritsch, Albert. See Albin Kurtenacker.

Fritsch, Julius. See Robert Kremann. Fritsch, Rodolfo, is selenium present in the animal and the plant organisms? A., i, 206.

Fritz, Felix, spontaneous decomposition of linoxyn, A., i, 303.

Froboese, Victor, volumetric estimation of sulphurous acid in organic substances by distillation, A., ii, 592.

Froelicher, Victor, and Julius Berend Cohen, the nitro- and amino-derivatives of m-hydroxybenzoic acid, T., 1425.

Froidevaux, J., and Henri Vandenberghe, estimation of ammoniacal nitrogen in fertilisers containing calcium cyanamide and ammonium salts, A., ii, 462.

Fromm, Emil, and Alfred Ehrhardt, stereoisomeric derivatives of phenacyl sulphide, A., i, 275.

Fromm, Emil, and Richard Klein, the olibanols, A., i, 797.

Fromm, Emil, and Adolf Kohn, derivacontaining sulphur prepared tives from ethylene chlorohydrin, A., i, 242.

Frühling, Adelheid. See Karl von Auwers.

A.VolkmarSee Kohls-Frumkin, chütter.

Fry, William H. See Charles J. Moore.

Fryer, Percival John, time factor in saponification, A., ii, 319.

Fuchs, Walter, tautomerism of phenols. III. Sodium hydrogen sulphite and phloroglucinol, A., i, 241.

tautomerism of phenols. IV., A., i,

lignin and the sulphite boiling process, A., i, 309.

Fühner, Hermann, narcotic action of light petroleum (pentaue, hexane, heptane, octane), A., i, 478.

Fürth, Otto von, and Fritz Lieben, colorimetric investigation of tryptophan. III. The cleavage of tryptophan during hydrolysis of proteins, A., i,

colorimetric experiments on tryptophan. IV. Formation of melanoidin by the acid hydrolysis of protein and its dependance on tryptophan complexes, A., i. 820.

colorimetric experiments on tryptophan. V. The proteins of immune sera and their tryptophan content,

A., i, 828.

colorimetric investigation of tryptophan. II. Systematic investigation of the colorimetric estimation of tryptophan based on Voisinet's reaction; the application of this method to proteins and organs, A., ii, 71.

Fürth, Otto von, and Edmund Nobel, colorimetric investigations of trypto-I. The tryptophan content of blood serum and milk, A., i, 74.

Fürth, Reinhold, colour and Brownian movement of ultra-microscopic metallic particles, A., ii, 243. Fujimori, Y. See L. Launoy.

Fujita, Atsushi, ψ-tetrahydroanemonic acid, A., i, 792.

See also Yasuhiko Fujita, Atsushi. Asahina.

Fukuda, Mitsuharu. See BunsakuArakatsu and Masamichi Kimura.

Fukuzawa, Akira. See Sojiro Kawase. Fuller, A. V., new apparatus for quantitative sublimation, A., ii, 222.

Fulmer, Ellis I., effect of alcohol on the toxicity of phenol towards yeast, A., i, 293.

acclimatisation of yeast to ammonium fluoride and its reversion in wort,

A., i, 910. Fulmer, Ellis I., Victor E. Nelson, and Frank F. Sherwood, the nutritional requirements of yeast. I. The rôle of vitamins in the growth of yeast, A., i, 292.

the nutritional requirements of yeast. II. The effect of the composition of the medium on the growth of yeast, A., i, 292.

Fulmer, Ellis I. See also Victor E. Nelson.

Funcke, Yngve, Brodie's hydrocarbon, melene, C₃₀H₆₀, A., i, 533. estimation of urea, A., ii, 468.

Funcoka, S., distribution of sodium salts in plant and animal cells, A., i, 907.

Funk, Casimir, and Harry E. Dubin, a test for anti-beri-beri vitamin and its practical application, A., ii, 72.

Furukawa, Sciji, chemical constitution and taste of aldehydes, ketones, etc., A., i, 637.

G.

Gabriel, Siegmund, primary quaternary bases, A., i, 58.

Gabriel, Siegmund, and Wilh. Gerhard, derivatives of certain o-nitroketones. I. and II., A., i, 441, 687.

Gadamer, Johannes, and Fritz Hammer,

scopoline, A., i, 588.

Gadamer, Johannes, and Frieda Knoch, the action of ethyl chloroformate on tertiary cyclic amines [alkaloids], A., i, 579.

Gad-Andresen, Knud L., the distribution of urea in the organism, A., i, 832.

Galatis, Lucas, some derivatives of phydroxyphenylglycine, A., i, 556.

Galavielle, Portes, and Cristol, generalisation of Salkowski's, Liebermann's, and Schiff's reactions [for cholesterol], A., ii, 525.

Galizzi, A. See Riccardo Ciusa.

Gallagher, Patrick, phototropy, A., i,

Gamble, C. A. See Charles A. Browne. Ganassini, Domenico, chemico-toxicological detection of morphine, A., ii, 471.

Gannage, E. See Marc Tiffeneau. Garban, H. See Marcel Brulé.

García, Eduardo D., analysis of fluorides, **A**., ii, 345. estimation of phosphorus in copper

phosphide, A., ii, 346. the estimation of silicon in cast iron,

A., ii, 348.

assay of fluorides; modification of Starck and Thorin's method, A., ii,

García, Eduardo D. See also Victor Arreguine.

García, María L. Lecce de, additive properties of salts of organic acids, A., ii,

Gardner, John Addyman, composition of the unsaponifiable matter of the ether extract of human fæces, A., i,

Gardner, John Addyman, and Francis William Fox, source of error in the colorimetric methods for the estimation of cholesterol in tissue fats, A., ii, 563.

Gardner, John Addyman, and May Williams, methods of estimating cholesterol and allied substances, A., ii, 563.

Garner, William Edward, and C. L. Abernethy, heats of combustion and formation of nitro-compounds. Benzene, toluene, phenol, and methylaniline series, A., ii, 435.

Garner, William Edward, and Douglas Norman Jackman, catalysis of the mutarotation of dextrose by metals,

T., 1936.

Garner, William Edward, and James Irvine Orme Masson, the activity of water in sucrose solutions, A., ii, 250.

Garner, William Edward, and Kichimatsu Matsuno, the explosion of acetylene and nitrogen, T., 1903.

Garnier, M. See Paul Pascal.

Garrison, Allen. See Harry B. Weiser. Gartner, Erich, weighing of the precipitation vessel with the precipitate in quantitative micro-analyses; two methods based on this principle, A., ii, 123.

Gascard, Albert, the higher terms of the saturated fatty series, A., i, 536.

Gassmann, Theodor, the detection of selenium in the human, animal, and plant organisms, A., i, 78.

Gastaldi, Carlo, pyrazines, A., i, 602. Gattermann, Ludwig, and Hans Rolfes, azides, anthranils, and azo-derivatives of anthraquinone, A., i, 817.

Gaucher, Louis, and Georges Rollin, a new calcium salt, A., i, 220.

Gaule, Alice. See Hermann Staudinger. Gault, Henri, and R. Weick, additional properties of the keto-enolic double linking, A., i, 674.

the additive properties of the ketoenolic double linking, A., i, 728.

Gautier, Emile Justin Armand, obituary notice of, T., 537.

Gavron, Joseph L. See George W. Raiziss.

Gay, L., distillation and rectification, A., ii, 85.

Geake, Arthur. See Maximilian Nieren-

Gehrcke, E., atomic nuclei, A., ii, 323. symmetrical coupled groups of lines

in the iron spectrum, A., ii, 612. Gehrcke, E., and L. C. Glaser, fine structure of band spectra, A., ii, 611. Gehrcke, E., and E. Lau, Balmer series of hydrogen, A., ii, 565.

Geigel, Heribrant. See Hans von Halban.

Geijer, Per, the cerium minerals of Bastnâs, Sweden, A., ii, 702.

Geilmann, W., micro-estimation of nitrogen in agricultural materials, A., ii, 128.

Geisselbrecht, G. See Walther Dilthey. Gellendien, Walter. See Bernhard Neumann.

Geloso, Max, the reduction of permanganate by arsenious acid, A., ii, 115.

Genelin, S., expulsion of a gas from its solution by changing its solvent, A., ii, 105.

the preparation of nitrogen peroxide from air with the spark from a weak induction coil, A., ii, 105.

General Electric Co., Ltd., London, Research Staff, disappearance of gas in the electric discharge. 1I. and III., A., ii, 369, 533.

micro-analysis of gases by the use of the Pirani pressure gauge, A., ii,

591.

Gennari, M. See Ernesto Puxeddu. George, Herbert John. See David Leonard Chapman.

Georgievies, Georg von, adsorption and solubility, A., ii, 491.

Gérard, P. See P. Carnot.

Gerhard, Wilh. See Siegnund Gabriel.
Gerhardt, O. See Hermann Staudinger.
Gerhardt, Otto, hydrazones and azines.
II. Condensation products of aromatic ketohydrazones with orthoquinones,
A., i, 746.

Gerlach, W. See M. Born.

Germann, Albert F. O., devitrification of glass; a surface phenomenon; repair of crystallised glass apparatus, A., ii, 262.

Gerngross, Otto, benzoyl derivatives of histidine and histamine, A., i, 57. preparation of 5(4)-arylalkylaminoalkylglyoxalines of the general formula C₃H₃N₂ [CH₂]_x NH [CH₂]_x aryl, A., i, 454.

Gerold, Erich, density, refractivity relationship and dispersion of gaseous nitrogen at its boiling point, A., ii, 585.

Gersdorff, C. E. F. See Carl Oscar Johns.

Gerth, O., electromotive force of the iodine-silver element and the heat of formation of silver iodide, A., ii, 534.

Getman, Frederick Hutton, absorption spectra of potassium ferro- and ferricyanides, A., ii, 287.

Ghosh, Brojendra Nath. See Ananda Kishore Das.

Gibson, David Templeton, and Alexander Killen Macbeth, the action of alkyl nitrates on piperidine, T., 438. Gibson, George E., and William Albert Noyes, obliteration of the characteristic spectra of metals by certain gases, A., ii, 610.

Gibson, I. A. See John A. Wilkinson. Gibson, William Howicson. See Oscar

Lisle Brady.

Giemsa, G., and Josef Halberkann, einchona alkaloids. IV. Transformations of the diazonium compounds of 5-aminocupreine and 5-aminohydrocupreine and their methyl and ethyl ethers; formation of diazoanhydrides and of cuprean and hydrocuprean and their ethers; β-ethylcupreine, A., i, 581.

cinchona alkaloids. V. Stereoisomeric compounds of hydrocuprean,

A. i, 583.

Gillet, Alf., shifting of the ethylenic bond in presence of acid catalysts, A., i, 490.

molecular rearrangement of unsaturated compounds in acid solution, A., i, 533, 761.

Gillet, Camille. See H. Buttgenbach. Gillis, Clara L. See Richard F. Jackson. Gillis, J., solubility of lactose, A., i, 11. Gilmour, George van Barneveld, reactions

of sugars and polyatomic alcohols in boric acid and borate solutions, with some analytical applications, A., ii, 221.

Girsewald, Conway von, and Hans Siegens, action of hydrogen peroxide on hexamethylenetetramine, A., i, 316.

new nitrogenous peroxide compounds from formaldehyde, A., i, 356.

Giua, Mario. See Michele Giua.

Giua, Michele, aromatic nitro-derivatives. XII. Action of as.-phenylmethyl-hydrazine on β- and γ-trinitro-toluenes, A., i, 198.

new bromotrinitrobenzene, A., i,

551.

nitration of toluene, A., i, 712.

Giua, Michele, and A. Angeletti, aromatic nitro-derivatives. XIII. Substitution in the benzene nucleus, A., i, 556.

Giua, Michele, and E. Bagiella, unsaturated compounds. III. Condensation of p-aminoacetophenone and acetyl-p-aminoacetophenone with aromatic aldehydes, A., i, 730.
Giua, Michele, and Mario Giua, mole-

Giua, Michele, and Mario Giua, molecular organic compounds. VI. Additive compounds of s-trinitroanisole and trinitro-m-cresol methyl ether with certain tertiary bases, A., i, 592. Giua, Michele, and Mario Giua, aromatic XV. Substitution nitro-derivatives. in the benzene nucleus, A., i, 858.

Giua, Michele, A. Marcellino, and A. Curti, additive compounds and the process of substitution in the benzene V. Organic molecular compounds, A., i, 193.

Givaudan & Co., L., constitution of the peppermint ketone of eucalyptus oils,

A., i, 793.

See E. Gehrcke. Glaser, L. C.

Glasstone, Samuel, physical chemistry of the oxides of lead. I. The solubility of lead monoxide, T., 1689.

physical chemistry of the oxides of II. The supposed enantiomorphy of lead monoxide, T., 1914. the direct iodometric estimation of

lead peroxide, T., 1997.

Glattfeld, John W. E., and George E.

Miller, the C₄-saccharinic acids. I. The resolution of dl-βγ-dihydroxybutyric acid into the optically active components; the derivatives of these acids, A., i, 7.

Glattfield, John W. E., and C. H. Milligan, the preparation of optically active hydrazines. I. The preparation of dl-p- $\alpha\beta$ -dimethylpropylphenylhydrazine; the isolation of pure d-p-aβ-dimethylpropylaniline, A., i, 63.

Glattfelder, A. See P. Karrer.

Glatzel, Emanuel, a crystalline normal dolomite from the Kneifelspitze, Berchtesgaden, Bavaria. A., ii, 120.

Glauser, Th. R., combustions with tel-

lurium dioxide, A., ii, 416. Glaze, Francis W., estimation of small amounts of lead in brass, A., ii, 559.

Glenn, M. L. See Esper S. Larsen. Glocker, R., and M. Kaupp, atomic

structure and scattered radiation, A., ii, **32**3.

Glocker, R. See also L. Baumeister. Glover, Thomas. See Gilbert Thomas

Morgan.

Gluud, Wilhelm, conversion of ammonium sulphide and of thiosulphates into sulphates, A., ii, 697.

Gmachl-Pammer, Julius, softening of carbon, A., ii, 111.

Gmachl-Pammer, Julius. See also Robert Kremann.

Gmelin, H. See Georg Grube.

Gnezda, Julius, theory of valency. The behaviour of decolorised magenta solutions. II. The configuration of benzene and the organic hydroxyl group, A., ii, 394.

Godchot, Marcel, the catalytic hydrogenation of suberone, A., i, 114. some derivatives of thujamenthone,

A., i, 329.

Goddard, Archibald Edwin, organo-derivatives of thallium. I. Some reactions of thalliumdialkyl haloids, T., 672.

metallic derivatives of nitrophenolic compounds. I. Interaction of barium, strontium, and calcium hydroxides with the mononitrophenols, T., 1161.

organo-derivatives of thallium. Interaction of thalliumdialkyl hydroxides with nitrophenols and nitrocresols, T., 1310.

Goddard, Archibald Edwin. See also

(Mrs.) Dorothy Goddard.

Goddard (Mrs.) Dorothy, and Archibald Edwin Goddard, metallic derivatives of nitrophenolic compounds. II. Some nitrotolyloxides of metals of Group

II., T., 2044. Godon, F. de. See Alphonse Mailhe. Goeb, Aug. See Julius Bredt. Goebel, Alfred. See Hans Lecher. Göhring, Rudolf. See Ernst Späth.

Goldberger, A. von. See Eugen Bamberger.

Goldschmidt, Heinrich, and Asbjörn Braanaas, kinetics of the reduction

of azo-compounds, A., ii, 184.
Goldschmidt, Victor Moritz, reaction between iron sulphide and carbon dioxide, A., ii, 553. Goldstein, Henri. See Friedrich Kehr-

mann, and Hermann Staudinger.

Gonnermann, Max, the biology of silicic acid, alumina, and iron, A., i, 79.

González, A. See Ernest Fourneau. González, F. See Enrique Moles.

Goodson, John Augustus, constituents of the bark of Zanthoxylum macrophyllum, Oliver, A., i, 488.

Gordon, J. R. See C. W. Simmons.

Gorini, Constantino, proteolytic activity of lactic organisms. V. Phenomena of sudden physiological mutation A., i, 641.

Goris, A., and Ch. Vischniac, the alkaloids of valerian, A., i, 488.

Gorter, K., laurotetanine, the tetanising alkaloid of various Lauraceæ, A., i, 587.

Gortner, Ross Aiken. See J. Arthur Harris, and George E. Holm.

Gossner, B., the chemical constitution of silicates, A., ii, 649.

Gottlieb-Billroth, Hans. See KurtHeinrich Meyer.

Gough, William Henry. See Stanley Francis Birch.

Gränacher, Ch., the oxidation of aliphatic hydrocarbons by nitrogen peroxide, A., i, 2.

oxide, A., i, 2. Grafe, Eduard. Sec Gustav Embden. Grafton, E. H. See William Draper Harkins.

Graham, Hugh, and Alexander Killen Macbeth, colorations produced by substituted nitroforms, T., 1362.

Graham, V. A. See James B. Sumner. Grahl, Ludwig. See Otto Fischer.

Gralka. Richard. See Hans Aron.

Gramont, (Comte) Arnaud de, list of the most sensitive rays of the elements, suitable for use in their detection, A., ii, 73.

the quantitative sensitiveness of the spectra of silicon in molten salts and steels, A., ii, 474.

Gramont, (Comte) Arnaud de, and Gustave Adolphe Hemsalech, the rôle of electrical actions in the emission and appearance of certain types of rays in the spectrum of magnesium, A., ii, 611.

Grandjean, Francis, the existence of equidistant differentiated planes normal to the optic axis in anisotropic liquids (liquid crystals), A., ii, 91.

Grandmougin, Eugène, the dibromoanthraquinone used in the synthesis of alizarin, A., i, 871.

the constitution of the polysulphonated derivatives of indigotin, A., i, 889.

Grant, E. H., reaction of sparteine, A., ii, 71.

Grant, Reginald Lindsay, and Frank Lee Pyman, the nitro- and aminoderivatives of 4-phenylglyoxaline, T., 1893.

Gratia, André, mechanism of anticoagulant actions [in blood clotting], A., i, 753.

Graumann, Erich. See Erich Schmidt. Gray, F. J. See Walter Hoge Mac-Intire.

Gray, J., the relation of the animal cell to electrolytes. A., i. 145.

to electrolytes, A., i, 145. Graziani, F., and L. Losana, comparison of the analytical methods used for alloys; estimation of manganese in cast-iron, A., ii, 464.

Greaves, Joseph E., and Yeppa Lund, the rôle of osmotic pressure in the toxicity of soluble salts, A., i, 758.

Grebe, Leonhard, and Albert Bachem, the Einstein gravitational displacement in the case of the nitrogen band λ = 3883 Å.U. in the sun's spectrum, A., ii, 143.

Green, Arthur George. See British Dyestuffs Corporation, Ltd.

Green, Stanley Joseph, and Thomas Slater Price, the chlorovinylchloroarsines. T., 448.

arsines, T., 448.

Greenish, Henry G., and Constance E.

Pearson, new source of santonin, A.,
i. 211.

Grégoire, Ach., colorimetric estimation of phosphoric acid, A., ii, 462.

Grégoire, Ach., and Em. Carpiaux, estimation of chlorine, sulphur, and phosphorus in organic substances, A., ii, 461.

Griebel, C., reaction for the microchemical detection of "chinosol" or 8-hydroxyquinoline salts, A., ii, 606.

Griessbach, Robert, precipitation equilibria, A., ii, 314.

Griffin, Roger C., solubility of metals in acids containing formaldehyde, A., ii, 115.

Griffith, Robert Owen, and William James Shutt, the decomposition of ozone by light of the visible spectrum, T.. 1948.

Griffiths, Evan Dalton. See Fred Barrow. Grigaut. See Chauffard.

Grignard, Victor, and P. Crouzier, the preparation of cyanogen bromide and iodide, A., i, 404.

Grignard, Victor, G. Rivat, and G. Scatchard, \$B'-di-iododiethyl sulphide and its application to the detection and estimation of yperite. A., ii, 282. Grimm, H. See Kasimir Fajans.

Grimme, Clemens, analysis of shepherd's purse (Capsella bursa pastoris), A., ii, 720.

Grimmer, Walther, and B. Wiemann, microchemistry of micro-organisms. I. Biochemistry of Bacillus mesentericus vulgatus, A., i, 479.

Grist, William Robinson. See Gilbert Thomas Morgan.

Grob, Walther. See Chemische Fabrik Rhenania Akt.-Ges.

Groll, J. Temminck [with C. N. van der Meer], influence of bile and bile salts on the most important digestive ferments, A., i, 205.

ments, A., i, 205.

Gross, E. G., and H. Steenbock, creatinuria. II. Arginine and cystine as procursors of creatine, A., i, 700.

creatinuria. III. The effect of thyroid

creatinuria. III. The effect of thyroid feeding on creatinuria, A., i, 700.

Gross, R. Eberhard, course of the reaction of arginase, A., i, 522.

Grotlisch, V. E., and W. C. Smith, detection and estimation of coal-tar oils in turpentine, A., ii, 659.

Grube, Georg, and H. Gmelin, electrolytic formation of the alkali salts of ferrous and ferric oxides, A., ii, 49. Grün, Adolf, constitution of the resin acids of colophony, A., i, 344.

Grün, Adolf [with Josef Scholze and Franz Wittka], alkyl interchange and its relationship to the constitution of fats, A., i, 222.

Grün, Adolf, and Th. Wirth, oxidation of paraffin wax to true wax in ultra-

violet light, A., i, 3.

estimation of volatile alcohols, A., ii,

Grün, Adolf, and Franz Wittka, elucidation of the constitution of glycerides, A., i, 220.

Grünbut, Leo, detection and estimation of lævulic acid in foods, A., ii, 602.

Grünhut, Leo. See also WilhelmFresenius.

Grüss, J., reagent for wood and vanillin, A., ii, 284.

Grützner, Rudolf. See Eduard Strauss. Gruijter, G. J. de. See Andreas Smits. Gruzewska, (Mme.) Z., the mucilaginous substances of Laminaria flexicaulis, A., i, 704.

Gruzewska, (Mme.) Z., and E. Fauré-Frémiet, the localisation of glycogen in the liver and the muscles of dogs fed with a view to the maximum production of this reserve, A., i, 699.

Gudden, B., and Robert Pohl, photoelectric conductivity and phosphorescence, A., ii, 145.

Guénot, L. See Louis Fournier.

Günther, Paul, specific heat at low temperatures, A., ii, 16.
Günther, S. See P. Karrer.

Günther-Schulze, A., behaviour of electrolytic ions in solid substances. II. Dissociation relationships in permutite, A., ii, 9.

some base equilibria in permutite, A.,

electromotive behaviour of aluminium, A., ii, 535.

volume of kations in permutite, A., ii,

the function of water of crystallisation in the behaviour of permutite, A., ii, 642.

Günzburg, L. See Erich Adler.

Guertler, William Minot, and Karl Leo Meissner, the theory of smelting. II. Equilibria between pairs of metals and sulphur. I. The system. copper-lead-sulphur, A., ii, 402.

the theory of smelting. III. Equilibria between pairs of metals and sulphur. The system, copper-antimony-sulphur, A., ii, 589.

Guertler, William Minot, and Karl Leo Meissner, theory of smelting. IV. Equilibrium between metal-pairs and sulphur. The system, copper-manganese-sulphur, A., ii, 640.

Guichard, Marcel, the general study of

catalysis, A., ii, 390.

Guild, F. N., flagstaffite, a new mineral, A., ii, 51.

Guillaume, Ch. Ed., cause of the instability of nickel steels; its elimination, A., ii, 50.

Guillemard. See Alexandre Desgrez.

Guillet, Léon, the tempering of brasses containing tin, A., ii, 405.

Gunn, J. A., agglutination by ricin, A., i, 284.

Guntz, A. A., an apparatus for registering variations of a gaseous mass with time, A., ii, 389.

Gupta, Biraj Mohan, an investigation on the influence of negative groups of different character on the reactivity of hydrogen atoms carried by the same carbon atom. I., T., 298.

Guthier, Alexander, and P. Beckmann, protective colloids. IX. Isinglass as protective colloid. I. Colloid chemical investigation of isinglass, A., ii, 312.

Gutbier, Alexander, and R. Emslander, colloidal selenium, A., ii, 636.

Gutbier, Alexander, Ferdinand Falco, and Th. Vogt, alkali pentachloro- and pentabromo-ruthenates [ruthenochlorides and ruthenobromides], A., ii, 457.

Gutbier. Alexander, and Ferdinand Flury [with Fr. Heinrich], effect of freezing on colloidal selenium, A., ii,

Gutbier, Alexander, J. Huber, and R. Haug, protecting colloids. Saponin as protecting colloid. I. General colloid - chemical investigation on guaiacum-saponin and quillain-saponin, A., ii, 537. otecting colloids. X. Saponin as

protecting colloids. protecting colloid. gold, A., ii, 538. II. Colloidal

Gutmann, August, action of normal sodium arsenite on thiocyano-compounds, A., i, 653.

Guttmann, Ernst. See Martin Freund. Guye, Philippe Auguste. See August L. Bernoulli.

Gyemant, A., electro-endosmosis and ion adsorption, A., ii, 298.

Gyemant, A. See also Leonor Michaelis. György, Paul. See Ernst Freudenberg and Peter Rona.

Gyulay, J. von. See G. Klemp.

H

See Robert Schwarz. **H**aacke, A. Haag, J. R. See A. G. McCall.

Haakh, Hermann, preparation of hydroxy-

aryl aldehydes, A., i, 729. Haar, Anne Wilhelm van der, saponins. IV. The saponins of the nuts of Pseudophænix vinifera, Beccari, and their magnesium and calcium salts, A., i,

as, Arthur, rotation spectra and isotopy, A., ii, 286. Haas.

Haas, A. R. C. See Winthrop John Vanleuven Osterhout.

Haas, Friedrich Wilhelm. See Theodor Curtius.

Haas, Paul, carrageen (Chondrus crispus). II. The occurrence of ethereal sulphates in the plant, A., i, 839.

Haberland, E. See Arthur Binz.
Hackh, Ingo W. D., the structural relation of isoquinoline- and phenanthrene-alkaloids, A., i, 800.

Hackspill, Louis, and E. Botolfsen, the preparation of calcium carbide from calcium ammonium and acetylene, A., ii, 549.

Hadjopoulos, L. G. See M. Kahn. Haeften, F. E. van. See ASee Arnold Frederik Holleman.

Haehl, A. See J. Martinet.

Hähle, Herbert. See Roland Scholl.

Haehn, Hugo, exact demonstration of tyrosinase; the tyrosinase reaction, A., ii, 528.

colloid-chemical phenomena in the tyrosinase reaction, A., ii, 579.

Haendel, L., and K. W. Joetten, chemotherapeutic experiments with "205 Bayer," a new trypanocidal agent of special activity, A., i, 908.

Hänggi, Eugen, nitrobenzoates of the three cresols, A., i, 244.

Haenseler, C. M., effect of salt proportions and concentrations on the growth

of Aspergillus niger, A., i, 836. Haerdtl, H. See Maximilian Samec. Härtel, Gustav. See Robert Behrend. Häuber, Hans. See Aladar Skita.

Hagen, Oskar, modified Soxhlet extraction apparatus, A., ii, 104, 502, 634.

Hagenböcker, Alfred. See Maximilian $reve{P}$. Schmidt.

Hagendorn, Max. See Paul Horrmann. Haggard, Howard W., and Yandell Henderson, respiration and blood alkali during carbon monoxide asphyxia, A., i, 752.

Hahn, Amandus, method of action and electrolytic nature of diastatic ferments, A., i, 523.

Hahn, Amandus, and Georg Barkan, interconversion of creatine and creatinine. I. and II., A., i, 515.

Hahn, Amandus, and Rudolf Michalik, the influence of neutral alkali salts on diastatic enzymes. III. Investigations on pancreatic diastase, A., i, 282.

Hahn, F., detection of methyl alcohol in spirits, A., ii, 281.

new apparatus for the generation of

gas, A., ii, 634.

Hahn, Fred C., 4-methylbenzophenone chloride and its condensation with phenol, A., i, 243.

Hahn, Friedrich L., and Peter Philippi, quantitative separation of arsenic, antimony, and fin, A., ii. 524.

Hahn, Friedrich L., and H. Walter, hexamethylenetetramine. I., A., i,

Hahn, Friedrich Vincenz von, colour changes on coagulating sulphide hydrosols, A., ii, 46.

sulphide sols. II. Sol preparation by means of gaseous hydrogen sulphide, A., ii, 577.

quantitative methods of coagulation for suspensoids, A., ii, 684.

Hahn, Otto, a new radioactive substance in uranium, A., ii, 478. origin of uranium-Z, A., ii, 479.

Hahn, Otto, and Lise Meitner, application of the displacement rule to the case of substances emitting simultaneously both α - and β -rays, A., ii,

the properties of protoactinium. II. Life period and content in uranium minerals, A., ii, 150.

Hainsworth, W. R., and E. Y. Titus, absorption of carbon monoxide by cuprous ammonium carbonate solutions, A., ii, 259.

Halban, Hans von, and Heribrant Geigel, use of photo-electric cells in the measurement of light absorption

by solutions, A., ii, 145. photochemistry of tetrabenzoylethyl-

ene, A., ii, 147.

Halberkann, Josef, acetic acid derivatives of p-anisidine, A., i, 562.

transformation and hydrolysis of toluene-p-sulphonyl-p'-anisidideand its N-methyl derivative, A., i, 660.

transformation or (and) hydrolysis of the toluene-p-sulphonyl compounds of certain p-substituted anilines and their N-alkyl derivatives, A. i, 779.

Halberkann, Josef. See also G. Giemsa. Haldane, J. B. S., regulation of the alkalinity of the blood, A., i, 904.

Haldane, J. B. S. See also H. W. Davie. Hall, Archibald John. See Arthur Ernest Everest.

Hall, Claud H., jun., system of qualitative chemical analysis for the positive ions, A., ii, 651.

Hall, J. S. See R. Adams Dutcher.

Haller, Albin, and (Mme.) Pauline Ramart-Lucas, the two methyl dallylcamphorcarboxylates, the three propan-β-oleamphorearboxylolides, and the camphopropan-B-ol which is derived from them, A., i, 673. the products of reduction of dimethyl-

campholamide, A., i, 874. Haller, Herbert L. See Elliot Quincy

Adams and Louis A. Mikeska.

Haller, R., adsorption compounds. A., ii, 21. colour behaviour of congo-rubin, A.,

ii, 28. behaviour of cotton and wool toward

substantive dyes, A., ii, 576. Hallimond, A. F. [with J. H. White-

ley], monticellite crystals from a steel-works mixer slag, A., ii, 702. Hamel, J. F., the γ -chloroacetoacetic

esters, A., i, 537.

Hamel, J. F. See also Marcel Sommelet.

Hamer, (Miss) Frances Mary, a comparison of some isomeric isocyanines, T., 1432.

"coupled" Hammarsten, Einar, a nucleic acid from the pancreas, A., i, 200.

Hammarsten, Olof, action of chymosin and pepsin. VI. Preparation of pure stomach enzymes and observations on their action, A., i, 138.

Hammer, Fritz. **Johannes** Gadamer.

Hammet, L. See Hermann Staudinger. Hammett, Frederick S., creatine and

muscle tonus in man, A., i, 530. creatinine and creatine in muscle extracts. I. A comparison of the pieric acid and the tungstic acid methods of deproteinisation. The influence of the reaction of the medium on the creatinine-creatine balance in incubated extracts of muscle tissue of the albino rat, A., i, 906.

Hammick, Dalziel Llewellyn, rate of reaction of picric acid with nitrating acid, A., i, 239.

surface energy, latent heat, and com-

pressibility, A., ii, 84.

Hammick, Dalziel Llewellyn, and John
Mylne Mullaly, the dimorphism of potassium ethyl sulphate, T., 1802.

Hanáková, V. See Jiri Baborovský. Hance, F. E. See F. H. Rhodes. Handovsky, Hans, and Arthur Weil,

swelling of colloidal mixtures. A., ii, 92.

Handovsky, Hans. See also Emil Abderhalden.

Hanke, Martin. See Julius Stieglitz. Hannevart, annevart, Germaine, presence of calcium thiosulphate in Achromatium oxaliferum, Schew, A., i, 643.

Hannevart, Germaine. See also M.

Philippson.

Hannik, M., the oxidation of ferrous salts by potassium ferricyanide, A., ii,

Hannum, Edith. See F. M. Huntoon. Hantzsch, Arthur [Rudolf], the constitution of the salts derived from isatin and analogous substances, A., i, 598.

Hantzsch, Arthur [with J. Retinger, and Felix Krämer], tervalent carbon as chromophore in the halochromism of the alloxantins and analogous substances, A., i, 619.

Hantzsch, Arthur [with M. Stechow], actual and supposed isomerism in the

isatin series, A., i, 597. Hanusch, Julie. See Ernst Philippi. Hanzlik, Paul J.; the salicylates. XIII. The liberation of free salicylic acid from salicylate in the circulation, A., i, 698.

Hanzlik, Paul J., and A. Irvine, toxicity of some thioureas and thiuramdisulphides, A., i, 701.

Hara, Ryôsaburô, use of chemically precipitated iron in the synthetic production of alkali cyanide, A., i. 548.

Hara, Shohei, physiological action of oxalates, citrates, and tartrates, A., i, 478.

Harden, Arthur, and Francis Robert Henley, effect of acetaldehyde and methylene-blue on the fermentation of dextrose and lævulose by yeastjuice and zymin in presence of phosphate and arsenate, A., i, 480. the salt effect in alcoholic fermentation, A., i, 642.

Harden, Arthur, and Sylvester Solomon

Zilva, the synthesis of vitamin-B by yeasts, A., i, 702.

Harder, W. See P. Karrer.

Harding, Leonard, the melting points of mixtures of o- and p-toluenessulphonyl chlorides. T. 260.

sulphonyl chlorides, T., 260. the sulphonation of toluene with chlorosulphonic acid, T., 1261.

Harding, Watson G., experiments on wood cellulose, A., i, 402.

Hardy, F., the occurrence of different kinds of carbonates in certain soils, A., i, 215.

Harger, Rolla N., a direct method for the estimation of dicyanodiamide in cyanamide and mixed fertilisers, A., ii, 224.

Hari, Paul, the absorption of light by reduced hæmoglobin, A., ii, 287.

Harkins, William Draper, ionisation of strong electrolytes, A., ii, 160. natural systems for the classification of isotopes, and the atomic weights of pure atomic species as related to nuclear stability, A., ii, 445. constitution and stability of atom

nuclei, A., ii, 582.

isotopes; their number and classification, A., ii, 690.

Harkins, William Draper, and Y. C. Cheng, orientation of molecules in surfaces. VI. Cohesion, adhesion, tensile strength, tensile energy, negative surface energy, interfacial tension, and molecular attraction, A., ii, 242.

Harkins, William Draper, and Warren W. Ewing, surface energy of mercury and the energy relations at the interbetween mercury and other

liquids, A., ii, 87.

Harkins, William Draper, and E. H. Grafton, surface tension and molecular attraction; the adhesional work between mercury and organic liquids, A., ii, 87.

Harkins, William Draper. See also

George L. Clark.

Harloff, Erich. See Ernst Sieburg. Harms, Herbert. See Karl W. Rosenmund.

Harrel, C. G. See Frank Burnett Dains.

Harries, Carl Dietrich, purification of mercury, A., ii, 552.

Harries, Carl Dietrich, and Fritz Evers, the purification of mercury, A., ii, 698.

Harris, J. Arthur, Ross Aiken Gortner, and John V. Lawrence, the osmotic concentration and electrical conductivity of the tissue fluids of ligneous and herbaceous plants, A., i, 483.

Harris, John Edmund Guy. William Hobson Mills.

Harrison, Arthur P., comparative results with Scales's [zinc-copper couple] and Devarda's alloy for reducing nitric nitrogen, A., ii, 345.

Harrop, G. A., jun., estimation of lactic acid in blood, A., ii, 715.

Harshaw, H. M. See R. Dutcher.

Harst, J. C. van der, and C. H. Koers, the estimation of sugar in urine, A., ii, 601.

Hart, D. See Louis J. Curtman. Hart, Edwin Bret, H. Steenbock, and C. A. Hoppert, dietary factors influencing calcium assimilation. I. The comparative influence of green and dried plant tissue, cabbage, orange juice, and cod-liver oil on

calcium assimilation, A., i, 829.

Hart, Merrill C., and Arthur D.

Hirschfelder, mercury compounds of some phenylcarbinols, A., i, 140.

Hart, William Beamont, origin, development, and value of the thalleioquinine reaction, A., ii, 359.

Hartleben, Hans, the adsorption of alkali chlorides by animal charcoal, A., ii, 304.

Hartmann, A. F. See Philip Anderson Shaffer.

Hartmann, W. See Karl Fries.

Hartree, W., and Archibald Vivian Hill, regulation of the supply of energy in muscular contraction, A., i,

Hartridge, H., nitrite methæmoglobin and related pigments, A., i, 135.

Hartridge, H., and R. A. Peters, surface tension of oil-water interfaces, A., ii, 87.

Hartwig, L., and R. Saar, detection of lactic acid, A., ii, 356.

Harvey, Mortimer, and L. H. Backeland, phenolic hexamethylenetetramine compounds, A., i, 239.

Harvey, Thomas Featherstone, and S. Back, estimation of strychnine in scale preparations containing quinine and other cinchona alkaloids, A., ii,

Haselhorst, G., estimation of bilirubin in blood serum, A., ii, 472.

Hashimoto, Tokudji. See TokaokiSasaki.

Hashitani, Yoshitaka, occurrence of hordenine in seedlings of cereals, A., i, 86.

Hassan, K. Habib. See Gilbert John Fowler.

Hasselskog, Sven, estimation of hydrogen peroxide by means of stannous chloride, A., ii, 651. Hastings, A. Baird, a hydrogen elec-

trode vessel adapted for titrations, A., ii, 460.

Hastings, A. Baird, C. D. Murray, and H. A. Murray, jun., chemical changes in the blood after pyloric obstruction in dogs, A., i, 379.

Hatcher, W. H. See Otto Maass.

Hatschek, Emil, viscosity of suspensions of blood corpuscles, A., i, 72.

Haug, R. See Alexander Gutbier.

Haughton, John L., the constitution of the alloys of copper with tin.

and IV., A., ii, 641. Haughton, John L., and Kathleen E. Bingham, constitution of alloys of aluminium, copper, and zinc containing high percentages of zinc, A., ii,

Haurowitz, Felix, an investigation of the fats of the gonads of Rhizostoma cuvieri, A., i, 206.

Hauser, Enrique, spot reactions in qualitative analysis, A., ii, 344. estimation of sulphur in oils, A., ii,

517.

Hauser, Ernst, and Ernst Rie, a flame with very high temperature, A., ii, 623.

Hausknecht, P. See Edgar Wedekind. Hausmann, W., and W. Kerl, oligodynamic hæmolysis, A., i, 143.

Haw, A. B. See William Albert Noyes. Haward, William Arthur. See William Arthur Bone.

Hawley, F. G., new modification of the electrolytic estimation of copper, A., ii, 216.

Haworth, H. F., the measurement of electrolytic resistance using alternating currents, A., ii, 373.

Haworth, Robert Downs, and Arthur Lapworth, reduction of emulsified II. Some extennitro-compounds. sions of the method, T., 768.

Haworth, Walter Norman, and Edmund Langley Hirst, the constitution of the disaccharides. V. Cellobiose (cellose), T., 193.

Heath, Fred H., and Waldo L. Semon, reaction between selenium monochloride and ethylene, A., i, 6.

Hecht, N. H. See Louis J. Curtman. Hedelius, Arvid Hj., removal of halogens from some organic compounds, A., ii,

182. Hedelius, Arvid Hj. See also Hans von Euler.

Hedestrand, Gunnar, viscosities of solutions of amino-acids, A., i, 546.

Hedin, Sven Gustav, proteolytic enzymes in normal and pathological urines, A., i, 531.

Hedley, Thomas Johnson, an improved gas combustion furnace for use in organic analysis, T., 1242.

Hedvall, J. Arvid, and Josef Heuberger, a hitherto unknown copper aluminate of the spinel type, A., ii, 508.

Heering, Harry. See Hermann Leuchs.

See Walter H. Eddy. Heft, Hattie L. Heidelberger, Michael. See Walter Abraham Jacobs.

Heidhausen, G., the chemical constants, A., ii, 240.

Heidrich, Dorothea. See Heinrich Biltz.

Heiduschka, Alfred, and F. Englert, estimation of glycerol in wine by conversion into acraldehyde by means of

boric acid, A., ii, 524. Heiduschka, Alfred, and A. Steinruck, the fat of Caballus equus. A., i, 833.

Heiduschka, Alfred, and Ludwig Wolf, reactions of alkaloids with silico- and phospho-tungstic acids, A., ii, 469.

Heilbron, Isidor Morris, and Johannes Buck, the reactivity Sybrandtof doubly-conjugated unsaturated I. 4'-Dimethylamino-2ketones. hydroxydistyryl ketone, T., 1500.

the reactivity of doubly-conjugated unsaturated ketones. II. The action of hydroxylamine, semicarbazide, and phenylhydrazine on 4'-dimethylamino-2-hydroxydistyryl ketone and its methyl ether, T., 1515.

Heilbron, Isidor Morris. See also Edward Charles Cyril Baly.

Hein, Franz, organo-chromium compounds. I. Chromium pentaphenyl hydroxide, A., i, 826.

Heinrich, Fr. See Alexander Gutbier.

Heintze, S. See Hans von Euler.

Heinzelmann, A., estimation of mercury in its ores, A., ii, 521.

Heise, F. See Karl W. Rosenmund.

Helderman, W. D., the existence of hydrated or anhydrous compounds of sucrose with certain salts, A., i,

compounds of dextrose with salts, A., i, 396.

Helderman, W. D. See also Ernst Cohen.

erich, Burckhardt, synthesis of methyl cyclohexane-1:4-dione-2:3-Helferich, dicarboxylate, an orthoisomeride of succinylsuccinic ester, A., i, 185.

derivatives of α - and two new B-methylglucoside, A., i, 497.

Helferich, Burckhardt, and Walter Dommer, derivatives of γ-aminovaleraldehyde, A., i, 51.

Helferich, Burckhardt, and OskarLecher, γ-hydroxyaldehydes. γ -Hydroxy- γ -phenyl-n-butaldehyde,

Helfrich, Oregon B., and Ebenezer Emmet Reid, perchloromethyl mercaptan, A., i, **3**00.

Heller, Gustav, the constitution of isatin salts and isatol, A., i, 891.

Heller, Gustav [with Franz Bobach], iso-

curcumin. III., A., i, 423. Heller, Gustav, and Paul Jacobsohn, comparative preparation of derivatives of isatin, phthalimide, succinimide, and o-hydrazinobenzoic anhydride, A., i, 440.

Heller, Gustav, and Hugo Kretzschmann, 1:8-dihydroxynaphthalene, A., i. 458.

Hellriegel, Emil. See Hermann Leuchs. Hellsing, Gustaf, composition of Swedish shale oil, A., i, 549.

Helmkamp, R. W. See Tenney L. Davis. Helwert, Fritz. See Hartwig Franzen. Helwig, Edward L., estimation of hyposulphites and sulphoxylates, A., ii, 653.

Hemmerdinger. See Alexandre Desgrez. Hemsalech, Gustave Adolphe. (Comte) Arnaud de Gramont.

Henderson, George Gerald, and Joseph Kenneth Marsh, contributions to the chemistry of the terpenes. XX. The action of hypochlorous acid on pinene, T., 1492.

Henderson, G. H., range and ionisation of the a-particles from radium-C and thorium-C, A., ii, 617.

Henderson, Lawrence Joseph, blood as a physico-chemical system, A., i, 473.

Henderson, William F. See John C. Hessler.

Henderson, Yandell. See Howard W. Haggard.

Hendrixson, W. S., electro-titration of hydriodic acid and its use as a standard in oxidimetry, A., ii, 273.

estimation of iodic acid and silver by electrometric titration, A., ii, 411. electrometric estimation of bromate, dichromate, nitrite, and chloride ions, A., ii, 651.

Henglein, Fr. A., chemical constants and critical data, A., ii, 163. state of aggregation of the elements

and the atom model, A., ii, 322.

Henke, C. O., and Oliver W. Brown, electrolytic preparation of sodium permanganate, A., ii, 115.

Henley, Francis Robert. See Arthur

Henning, Fritz, the heat of vaporisation of water as a function of the temperature, A., ii, 167. power of emission of the metals and

methods for its determination, A.,

heat of combustion of benzoic acid, naphthalene, and sucrose, A., ii, 379.

Henning, Fritz.See also Alfred Stock.

Henrich, Ferdinand [August Karl], constituents of fir tree resin (turpentine from Pinus sylvestris), A., i, 679.

the accumulation of radioactive substance in ferruginous spring deposits, A., ii, 617.

Henrich, Ferdinand [with N. Matulka. Gust. Opfermann, K. Roedel, F. Rossteutscher, and W. Wunder], relation between fluorescence and chemical constitution in benzoxazole derivatives, A., i, 886.

Henriques, Valdemar. See Rich. Ege. Henry, Thomas Anderson, and Humphrey Paget, chenopodium oil, T., 1714.

Henstock, Herbert, the bromine compounds of phenanthrene. 55.

9:10-dihydrophenanthrene, T., 1461.

Hepburn, N. W., a modified Babcock method for determining fat in butter, A., ii, 716.

Hepworth, Harry, the action of the Grignard reagent on certain nitric esters, T., 251.

the action of the Grignard reagent on certain tervalent organo-iodo-compounds, T., 1244.

accelerated formation of magnesium alkyl and aryl haloids, T., 1249.

Hepworth, Harry, and Henry William Clapham, the action of the Grignard reagent on certain organo-sulphur compounds, T., 1188.

Herbert, Alfred Edwin. See British Dyestuffs Corporation, Ltd.

Hérissey, Henri, the hydrolysis of amethyl-d-mannoside by soluble ferments, A., i, 306, 523.

synthesising action of a-methyl-dmannosidase, A., i, 628.

Herles, Fr., inversion-constants for the

Clerget-Herzfeld method, A., ii, 418. Hermanns, Leo, and P. Sachs, the nature of Ehrlich's diazo-reaction. I.

and II., A., i, 531.

Hermans, P. H., iodometric estimation of acetone, A., ii, 467.

Hermans, P. H. See also Jacob Böeseken.

Hermsdorf, A. See Adolf Sieverts.

Leonhard. See ErnstHerrdegen, Müller.

Herrmann, Lisbeth. See Heinrich Biltz. Herschkowitsch, M., the decomposition of oxalates, A., i, 495.

Hertz, Gustav, absorption boundaries in the L-series, A., ii, 144.

Herz, Walter [Georg], critical data and valency in organic compounds, A., ii, 163.

calculation of the specific heats of I. and II., A., ii, 299, gases. 678.

surface tension and heat of vaporisation, A., ii, 301.

heat of vaporisation and critical data, A., ii, 301.

calculation of the van der Waals' constants α and b, A., ii, 301.

vapour pressure regularities. IV., V., and VI., A., ii, 302, 432.

thermal expansion of liquids, A., ii, 374.

temperature and degree of polymerisation, A., ii, 436.

number of atoms and the physical behaviour of organic liquids, A., ii, 484.

refraction of light of non-associated liquids, A., ii, 529.

relationships of the van der Waals' constants, A., ii, 573.

Walter, and Julius Mever. applicability of Mendeléev's rule in the case of benzene and its halogensubstitution products, A., ii, 381.

Walter.See alsoRichardLorenz.

Herzberg, Otto W. See Otto Maass.

Herzfeld, E., and R. Klinger, chemistry of the polysaccharides, A., i, 97.

are there any protective enzymes against the polysaccharides? A., i, 286.

Herzfeld, Karl F., application of statistics to chemical equilibria, A., ii, 313.

kinetic theory of osmotic pressure, A., ii, 384.

Herzfeld, Karl F. See also Kasimir Fajans.

Herzig, Josef, the methylation of proteins, A., i, 65.

the free amino-groups of the proteins. III., **A**., i, 199.

Herzig, Josef, and Marianne Schleiffer, benzilic acid, A., i, 244. Herzig, Josef, and S. Zeisel, tautomerism

of resorcinol, A., i, 663.

Herzog, Reginald Oliver, and Franz
Beck, the solubility of cellulose in [solutions of] the salts of the alkali and alkaline earth metals, A., i, 97.

Reginald Oliver, and K. Becker, crystallising power of compounds of high molecular weight, A., ii, 438.

Herzog, Reginald Oliver, and Willi Jancke, the physical structure of some organic compounds of high molecular weight, A., i, 12.

Röntgen-spectrographic observations on cellulose, A., i, 308.

Röntgen-spectrographic investigations of organic substances of high molecular weight, A., ii, 531.

Herzog, Reginald Oliver. See also R. Becker.

Herzog, Walter, the relationship between resinification and the constitution of chemical compounds, A., i,

Herzog, Walter, and I. Kreidl, separation of o- and p-toluenesulphonamides, A., ii, 357.

Hess, A. F., G. F. McCann, and A. M. Pappenheimer, experimental rickets in rats. II. The failure of rats to develop rickets on a diet deficient in vitamin-A, A., i, 757.

Hess, Kurt, constitution of cellulose, A., i, 12.

the degradation of scopoline, A., i, 683.

Hess, Kurt, and Franz Anselm, hygrine alkaloids. IV. Di-1-methyl-2-pyrrolidylmethane, A., i, 881.

Hess, Kurt, and Ernst Messmer, cellulose. III. Asymmetric structure of cellulose and the influence of ammoniacal copper hydroxide [Schweizer's reagent] on the rotation of carbohydrates, A., i, 401.

Hess, Kurt, and Ernst Messmer [with E. A. Kletzl], syntheses of aliphatic acyl derivatives of the sugar group. A., i, 305.

Hess, Kurt, and Heinrich Rheinboldt, the reducing action of the Grignard reagent and the existence of magnesium hydrogen haloid, A., i, 777.

Hess, Kurt, Walter Wittelsbach, and Ernst Messmer, cellulose. IV. Depolymerisation of ethylcellulose, A.. i, 710.

Hess, L. See Hermann Thoms.

Hess, Viktor F., and Maria Hornyak, relative ionisation of different gases by α-rays, A., ii, 292.

Hess, W. R., theory of the viscosity of heterogeneous systems, A., ii, 18.

Hesse, (Frl.) Margarete. See Ernst Hermann Riesenfeld.

Hessler, John C., and William F. Henderson, butyl- and isobutyl-cyanoacetic acids, A., i, 317.

Hessler, John C., and Robert M. Lamb. alkyl cyanoacetic esters, A., i, 231. Hetényi, Géza. See Stefan Rusznyák.

Hettner, Gerhard, influence of an external field on the rotation spectrum; analogy to the Stark effect, A., ii, 139.

regularities in the infra-red spectra of gases and their significance, A., ii,

Heuberger, Joseph. See J. Arvid Hed-

Heuser, Emil, and E. Boedeker, wood cellulose, A., i, 708.

Heuser, Emil, and G. Wenzel, comparative estimations of lignin in cellulose, A., ii, 715.

Heuser, Emil, and A. Winsvold, the formation of oxalic acid from lignin, A., i, 845.

Hevesy, Georg von, velocity of migration of the ions in crystals, A., ii, 172.

the mobility of univalent organic ions, A., ii, 236.

mobility of ions which are common with those of the solvent, A., ii, 295.

Hewett, D. Foster, and Earl V. Shannon, orientite, a new hydrous silicate of manganese and calcium, from Cuba, A., ii, 460.

Hewlett, C. W., the mass absorption and mass scattering coefficients for homogeneous X-rays of wave-length between 0.13 and 1.05 Angström units in water, lithium, carbon, nitrogen, oxygen, aluminium, and iron, A., ii,

Heyde, H. C. van der, natural immunity of the rabbit to atropine, A., i, 478.

Heydweiler, Adolf, electrical conductivity and density of aqueous solutions of electrolytes, A., ii, 481.

Heygendorff, W. von, a rotary burner, A., ii, 545.

Heyn, Myron. See Heinrich Biltz, and Fritz Hofmann.

Hickinbottom, Wilfred John. See Gilbert Thomas Morgan.

Hieber, Walter, applications of complexchemistry to the problems of organic chemistry. I. A new method for the titration of enols in keto-enolic mixtures, A., ii, 466.

Hiedemann, Egon, the electronic synthesis of chemical compounds. I. Formation of ammonia, A., ii, 694.

Higson, Geoffrey Isherwood, the reaction between persulphates and silver, T.,

Hilbert, Alfred. See Richard Anschütz. Hildebrand, Joel H., solubility. VI. Thermodynamic relation between solubility and internal pressure, A., ii. 307.

Hildebrand, Joel H., and Theo. F. Buehrer, solubility. V. Critical solution temperatures of white phosphorus with various liquids, A., ii, 24.

Hildebrand, Joel H., and Clarence A. Jenks, solubility. IV. Solubility relations of naphthalene and iodine in various solvents, including a method for evaluating solubility data, A., ii, 23.

Hilditch, Thomas Percy. See Edward

Frankland Armstrong.

Hill, Arthur E., distribution of a strong electrolyte between water and benzene, A., ii, 261.

Hill, Arthur Joseph, and J. J. Don-leavy, amines. IX. Alkylation of aromatic amines by heating with aliphatic alcohols, A., i, 714.

Hill, Archibald Vivian. See W. Har-

Hillebrand, William Francis, and Gustave Ernst Fred Lundell, volatilisation losses of phosphorus during evaporations of phosphates with sulphuric acid or fusions with pyrosulphate, A., ii, 129.

Hinsberg, Oscar, preparation of a compound of chloral with a phenol, A., i,

341.

Hinsberg, Oscar, and E. Roos, [the nature of] yeast fat, A., i, 148. Hinshelwood, Cyril Norman,

physico-chemical problems connected with the stability of explosives, T., 721.

Hinshelwood, Cyril Norman, and E. J. Bowen, influence of physical conditions on the velocity of decomposition of certain crystalline solids, A., ii, 443.

Hintikka, S. V., preparation of p-nitrotoluene-o-sulphonic acid from cymene, A., i, 332. constitution of lignin, A., i, 772.

Hirai, Kinsaouro, the Jacobs d-3:4-dihydroxyphenylalanine, A., Kinsaburo, the synthesis of

the formation of p-hydroxyphenyl-acetic acid and p-hydroxyphenylacrylic acid from tyrosine by means of bacterial action, A., i, 291.

Hirasawa, Masaru. See Ryago Inouye. Hirsch, Edwin F., rigor mortis in smooth muscle and a chemical analysis of fibromyoma tissue, A., i,

Hirsch, Julius. See Carl Neuberg. Hirschfelder, Arthur D. See Merrill

C. Hart.

Hirst, Edmund Langley. See Walter Norman Haworth.

Hisschemöller, F. W., the equilibria of permutites, A., ii, 495.

Hjalmar, $\not E lis$, precision measurements in the L-series of the Röntgen spectra; elements tungsten to copper, A., ii, 145.

precision measurements in the X-rays spectra. IV. K-series, the elements copper to sodium, A., ii, 292.

Hjort, A. M., and C. E. Kaufmann, the local anæsthetic properties of benzoylcarbinol, A., i, 834.

Hoagland, D. R., and J. C. Martin, effect of season and crop growth on the physical state of the soil, A., i,

Hoagland, D. R., J. C. Martin, and G. R. Stewart, relation of the soil solution to the soil extract, A., i, 214.

Hobart, F. B. See S. A. Braley. Hodges, E. Rattenbury, aluminium, A., ii, 589.

Hodges, James Hallett. See Gregory Paul Baxter.

Hodsman, H. J., apparatus for sodium peroxide fusions, A., ii, 345.

Höber, Rudolf, the [physiological] action of calcium, A., i, 74.

Hoeflake, (Mlle.) J. M. A., the nitration of the phenyl carbonates, A., ii, 540. Höfler, Karl, and A. Stiegler, an

abnormal permeability [of epidermal cells] for urea solutions, A., i, 642.

Hönigschmid, Otto,and Birckenbach, revision of the atomic weight of bismuth; analysis of bismuth chloride and bismuth bromide, A., ii, 646.

Hoeven, C. van der. See Arnold Frederik Holleman.

Hoffmann, J. I. See Gustave Ernst Fred Lundell.

Hoffmann, Hans, electrolysis of hot concentrated sulphuric acid, A., ii, 677.

Hofmann, Fritz, and Myron Heyn, polycyclic phenols from sodium phenoxide fusions, A., i, 506.

Hofmann, Karl Andreas, separation and identification of lactic acid as complex ferric sodium lactate, A., ii,

Hofmann, Karl Andreas, and Gustav Buhk, reactions of salts of nitrous acid with weak bases, A., ii,

Hofmann, Karl Andreas, and Wilhelm Freyer, colloids soluble in water from artificial charcoals, A., i, 8.

Hofmann-Meyer Alicc. See Meyer.

Hofwimmer, Franz, preparation guanidine salts, A., i, 320.

Hohl, Heinz. See Robert Kremann.

Holbøil, Svend Aage, Bang's micromethod for the estimation of dextrose, A., ii, 283.

Holborn, Ludwig, the isothermals of hydrogen, A., ii, 15.

Holde, David, and Ida Tacke, anhydrides of the higher aliphatic fatty acids, A., i, 842.

Holden, Edw. F., sarcopside from New Hampshire, A., ii, 268.

Holker, J., methods of measuring the opacity of liquids; relation between the number and size of red corpuscles and the opacity of their suspensions; relation between the microscopic appearance of precipitated calcium oxalate and the opacity of its suspensions; opacity of serum diluted with distilled water, physiologically normal

Hollander, A. I. den. See Arnold Frederik Holleman.

saline, and Ringer's solution, A., i,

Holleman, Arnold Frederik, the three tetrachlorobenzenes, A., i, 405. tificial "saccharin" substar artificial substances.

A., i, 552.

633.

Holleman, Arnold Frederik [with F. E. van Haeften, and C. van der Hoeven], the three tetrachlorobenzenes, pentachlorobenzene, and hexachlorobenzene; their reaction with sodium methoxide, A., i, 102.

Holleman, Arnold Frederik, and F. E. van Haeften, the six trichloronitro-benzenes and the three trinitrobenzenes; their reaction with sodium

methoxide, A., i, 167. Holleman, Arnold Frederik, A. I. den Hollander, and F. E. van Haeften, the nitration products of p-dichloro-

henzene, A., i, 503. Hollenberg, M. S. See Alexander Thomas Cameron.

Holló, Julius, investigations on the cause of the variations in the reaction in normal human urine, A., i, 288.

Holluta, Josef, and Josef Obrist, oxidimetric estimation of manganese in hydrofluoric acid solution, A., ii, 522.

Holm, George E., and Ross Aiken Gortner, the humin formed by the acid hydrolysis of proteins. VI. The effect of acid hydrolysis on tryptophan, A., i, 65.

Holmberg, Bror, extraction of sulphite liquors with ether and benzene, A., i, 25.

stereochemical studies. V. Stereochemistry of dichlorosuccinic acid, A., i, 539.

Holmberg, Bror, kation catalysis. IV., A., ii, 319.

lignin. I. Sulphite liquor lactone, A., i, 849.

Holmberg, Bror, and Martin Sjöberg, lignin. II. Dimethyl-sulphite-liquor lactone, A., i, 850.

Holmberg, Bror, and Teodor Wintzell, lignin. III. Alkali lignins, A., i, 850. Holmes, Walter C. See Homer Rogers.

Holmström, J. J., constituents of the roots of Rheum emodi, Webb, A., i,

Holzapfel, E. See Arthur Binz.

Homolka, B., action of alkalis on glyoxal, A., i, 544.

Honda, Kôtarô, and Takejirô Murakami, graphitisation in iron-carbon alloys, A., ii, 699.

Hoover, Charles R., the detection of carbon monoxide, A., ii, 654.

Hopff, Heinrich. See Kurt Heinrich

Hopkins, Arthur J., John B. Zinn, and Harriet Rogers, standardisation of weights, A., ii, 104.

Hopkins, Frederick Gowland, effects of heat and aeration on vitamin-A., A., i, 475.

vitamin content of milk, A., i, 477. an autoxidisable constituent of the cell, A., i, 635.

Hoppert, C. A. See Edwin Bret Hart. Horlacher, E. See P. Karrer.

Hornyak, Maria. See Viktor F. Hess. Horrmann, Paul, and Wolfram Behschnidt, picrotoxin. II. Behaviour of the bromopicrotoxinins toward concentrated halogen acids, A., i, 575.

Horrmann, Paul, and Max Hagendorn, picrotoxin. X. Degradation of α-picrotinic acid, $C_{15}H_{20}O_8$, to the acid, $C_{13}H_{14}O_4$, A., i, 347.

Horsch, W. Grenville. See Robert E.

Wilson.

Horst, Friedrich, comparative experiments on the adsorptive capacity of various kinds of charcoal; is Wiechowski's test parallel to the poison fixation? A., ii, 245.

Horst, F. W., detection and estimation of traces of hydrogen peroxide, A., ii,

Horton, Edward, the use of taka-diastase in estimating starch, A., ii, 661.

Horton, Frank, and Ann Catherine Davies, electron velocities for the production of luminosity in atmospheric neon, A., ii, 422.

production of radiation and ionisation by electron bombardment in pure and in impure helium, A., ii, 672.

Houben, H. See Walter Fraenkel. Houben, Josef, and G. Schreiber, methyl

dimethylaminobenzenesulphonates, and the nitrosation of N-methylanilinesulphonicacids in the nucleus, A., i, 106.

nitrososalicylic acid and nitrosoanthranilic acid, A., i, 109.

Howald, A. M. See W. D. Turner. Howell, Lloyd B., the reaction between magnesium phenyl bromide and the esters or anhydride of phthalic acid, A., i, 42.

Howell, Spencer P. See Charles E. Munroe.

Howes, Horace L., the luminescence of samarium, A., ii, 363.

Howie, Laurence. See Eric Ponder. Huber, Hans, the binary system, Ag. S-

Tl₂S, A., ii, 507. Huber, J. See Alexander Gutbier.

Hudleston, Lawson John, and Henry Bassett, jun., equilibria of hydrofluosilicic acid, T., 403.

Hüffer, E. J. E., the trichlorodinitrobenzenes; their reaction with sodium methoxide and with ammonia, A., i, 549.

Huerre, R., action of hydracids on essential oil of Juniperus oxycedrus; hydrochloride, hydrobromide, hydriodide of cadinine, A., i, 258.

Hüsgen, Hans, a lipotropic mercury

compound, A., i, 145.

Hüttig, Gustav F., the geometry of the co-ordination number, A., ii, 193. apparatus for simultaneous pressure and volume measurements of gases, A., ii, 195.

Hüttig, Gustav F. See also Wilhelm Biltz.

Hufferd, Ralph W., and William Albert Noyes, the application of Victor Meyer's esterification law to 2:6-dimethylbenzoic acid and its reduced derivatives, A., i, 416.

Hughes, William, nature of chemical forces and the anomaly of strong

electrolytes, A., ii, 481. application of the law of mass action to strong electrolytes and the derivation of the general equation of the ionisation isotherm, A., ii, 573.

Hughes, W. E., structure of metal electrolytically deposited on rotating cathodes, A., ii, 677.

Hugoson, E. See Leopold Ruzicka.

Hugounenq, Louis, and Gabriel Florence, a lecture experiment on blood nitrogen, A., i, 632.

derivatives of some amino-acids, A., i, 711.

Hulett, George Augustus, and O. A. Nelson, graphitic acid—a colloidal oxide of carbon, A., ii, 399.

Hull, A. W., arrangement of atoms in some common metals, A., ii, 38.

Hull, Mary. See Frederic Fenger.

Hulot, Pierre, rapid estimation of copper or iron in aluminium—copper or aluminium—iron alloys, A., ii, 656.

Hultman, Ivar N., Anne W. Davis, and Hans Thacher Clarke, the automatic separator in esterifications and other preparations, A., ii, 325.

Hulton, Henry Francis Everard. See

Julian Levett Baker.

Hunter, William Hammett, and Lillian M. Seyfried, a catalytic decomposition of certain phenol silver salts. V. The action of iodine on the sodium salt of trichlorophenol, A., i, 239.

Hunter, William Hammett, and G. H. Woollett, a catalytic decomposition of certain phenol silver salts. III. The action of mercury on tribromophenol bromide, A., i, 238.

a catalytic decomposition of certain phenol silver salts. IV. The constitution of the amorphous oxides,

A., i, 238.

Huntingford, D. B. See James Riddick

Partington.

Huntoon, F. M., P. Masucci, and Edith Hannum, anti-substance studies. III. The chemical nature of anti-substances, A., i, 144.

Hurtley, William Holdsworth, the production of carbon monoxide by the action of alkaline hypohalogenites on carbamide, A., i, 403.

Hurwitz, O. See P. Karrer.

Hutchinson, Arthur, and A. M. Macgregor, cornetite from Bwana Mkubwa, Northern Rhodesia, A., ii, 701.

Hynes, Walter A. See Carl P. Sherwin.

I.

Ibach, F. von. See Walther Dilthey.

Igi, Sadao, preparation of tetrachloroethane and trichloroethylene from
acetylene and chlorine, A., i, 841.

Iitsuka, Daidzi, metallographic investigation of the system, antimony sulphide-lead sulphide, A., ii, 206.

Ikawa, Masao, estimation of sulphate, chloride, and carbonate-ions in sodalime-glass, A., ii, 706.

Imes, Elmer S., absorption of some diatomic gases in the near infra-red, A., ii, 4.

Inamura, Kenzo, hydrates of aluminium nitrate, A., ii, 114.

CXX. ii.

Ingold, Christopher Kelk, the conditions underlying the formation of unsaturated and cyclic compounds from halogenated open-chain derivatives. I. Products derived from a-halogenated glutaric acids, T., 305.

the mechanism underlying the reaction between ethyl cyanoacetate and tautomeric substances of the

keto-enol type, T., 329.

experiments on the synthesis of the polyacetic acids of methane. I. The conditions controlling synthesis by the cyanoacetic ester method, and the preparation of methanetriacetic acid, T., 341.

the conditions underlying the formation of unsaturated and cyclic compounds from halogenated open-chain derivatives. II. Products derived from a-halogenated adipic acids, T., 951.

Ingold, Christopher Kelk, and Edward Arthur Perren, experiments on the synthesis of the polyacetic acids of methane. III. Conditions controlling synthesis by the cyanoacetic ester method, T., 1582.

experiments on the synthesis of the polyacetic acids of methane. IV. Conditions of formation by the cyanoacetic ester method of stable methanetriacetic esters, T., 1865.

Ingold, Christopher Kelk, and Walter James Powell, experiments on the synthesis of the polyacetic acids of methane. II. Some abnormal condensations of malonic and cyanoacetic esters with halogenated methanes, T., 1222.

experiments on the synthesis of the polyacetic acids of methane. V. The preparation of carboxymethane-

triacetic acid, T., 1869.

the reversibility of the Michael reaction, T., 1976.

Ingold, Christopher Kelk, and Jocelyn Field Thorpe, the chemistry of the glutaconic acids. XII. The simultaneous occurrence of 1:2- and of 1:3-addition to "nascent" glutaconic ester, T., 492.

Ingold, Christopher Kelk. See also Ernest Harold Farmer.

Inman, O. L., comparative studies on respiration. XVI. Hypotonic and hypertonic solutions, A., i, 386.

Inouye, Ryago, Suehiko Iwaoka, and Masaru Hirasawa, comparison of the chemical constitution of tussur silks, A., i, 67. Inouye, Suekichi, metallographic investigation of the system, tungsten-lead, A., ii, 205.

Inuganti, N. N. See Gilbert John Fowler.

Ionescu, Al., the separation of ptomaines from vegetable alkaloids in toxicological examinations, A., ii, 226.

estimation of dextrose in glucosides, A., ii, 525.

Ionescu, Al., and V. Vargolici, the estimation of dextrose in blood and in cephalorachidien fluid, A., ii, 220.

new method for the volumetric estimation of reducing sugars, A., ii,

Ionescu, Al. See also Stefan Minovici. Iredale, Thomas, the rôle of protective colloids in catalysis, T., 109.

the soaps as protective colloids for colloidal gold, T., 625.

Irvin, Roy. See Frank Burnett Dains. Irvine, A. See Paul J. Hanzlik.

Irvine, James Colquhoun, and John Walter Hyde Oldham, the constitution of polysaccharides. III. The relationship of l-glucosan to d-glucose and to cellulose, T., 1744.

Isaac, Salo. See Erich Adler and Gustav Embden.

Iseley, R. B. See George L. Clark.

Isgarischev, N., electrode processes in the presence of colloids, A., ii, 620.

Ishikawa, Seiichi, condensation of nitriles and thioamides. I. Benzonitrile and thiobenzamide, A., i, 728.

Ishiwara, Torajirô, magnetic determinations of A_0 , A_1 , A_2 , and A_3 points in steels containing up to 4.8 per cent. of carbon, A., ii, 643.

Ishiwari, Nisaburô, an alkaloid from Sinomenium diversifolius, A., i, 354.

Itagaki, Takeki. See Yoshiharu Murayama.

Italiener (Frl.). See Ernst Hermann Riesenfeld.

Itallie, Leopold van, Peru balsam and its adulteration, A., ii, 226.

Itallie, Leopold van, and M. Le Coultre, aristochin and optochin nitrates, A.,

Itallie, Leopold van, and A. J. Steenhauer, estimation of veronal in urine and human organs, A., ii, 607.

Iversen, Poul, the partition of phosphates between blood corpuscles and plasma in vivo and in vitro, A., i,

Iwaoka, Suchiko. See Ryago Inouye. Izaguirre, R. See Enrique Moles.

Jablonski, Ludwig. See Hans Einbeck. Jackman, Douglas Norman. See William Edward Garner.

Jackson, Daniel, and Jerome J. Morgan, measurement of vapour pressures of certain potassium compounds, A., ii,

Jackson, D. H. See Francis P. Venable.Jackson, Richard F., and Clara L. Gillis, the double-polarisation method for the estimation of sucrose and the evaluation of the Clerget divisor, A., ii, 67.

Jacob, Werner, 2-aldehydoanthraquin-

one, A., i, 794.

Jacobs, Walter Abraham, and Michael Heidelberger, syntheses in the cinchona series. VI. Aminoazo- and hydroxyazo-dyes derived from certain 5-amino-cinchona alkaloids and their quinoline analogues, A., i, 44.

Jacobsohn, Paul. See Gustav Heller. Jaeger, Frans Maurits, the action of light of short wave-lengths on some

organic acids and their salts, T., 2070.

isomeric chlorotetra-acetyl-dfructoses, A., i, 10.

the crystal forms of some substituted amides of toluene-p-sulphonic acid, A., i, 18.

Röntgenograms obtained by means of mica piles composed of crossed lamellæ, A., ii, 234.

Jaeger, Frans Maurits, and B. Kapma, accurate measurement of the electrical conductivity of electrolytes at temperatures up to 1600°, A., ii, 159.

Jäger, Otto. See Emil Knoevenagel. Wilhelm, and Helmuth von Jaeger, Steinwehr, the alleged uselessness of the Weston normal element, A., ii, 372.

Jänecke, Ernst, the fusion of potassium salts and mixtures of salts containing water of crystallisation. I. and II., A., ii, 94.

ternary systems with three solid phases of a special kind; the systems (Ba-K-Na)Cl, Mg-Cd-Zn, and similar cases, A., ii, 95.

the system, barium chloride-potassium chloride-sodium chloride, A., ii, 95. mixed crystals (K, Na)Cl in ternary systems, A., ii, 96.

the melting and boiling points of ammonium sulphate, A., ii, 697.

Järvinen, K. K., molecular attraction. V., A., ii, 167.

equation of condition for liquids, A., ii, 375.

Jaeschke, Walter. See Ernst Koenigs. Jaffeux, Pierre. See Marcel Delépine.

Jahn, Gerhard, supersaturated solid solutions in mixtures of wax-colo-

phony, A., i, 427.

James, R. W., the crystalline structure of bismuth, A., ii, 513.

James, R. W. See also IV. Lawrence Bragg.

AlexanderPringle, Jameson, and William Ringrose Gelston Atkins, physiology of the silkworm, A., i, 638.

Jamieson, George Samuel, Walter F. Baughman, and Dirk Hendrik Brauns, the chemical composition of peanut oi!, A., i, 840.

Jamieson, George Samuel. See also Walter F. Baughman.

Jancke, Willi. See R. Becker, and Reginald Oliver Herzog.

Jander, Gerhart, and Hans Cæsar Stuhlmann, chemical analysis with membrane filters. II. Volumetric estimation of zinc, A., ii, 711.

Janet, (Mlle.) Marthe Paul. See W. Mestrezat.

Janse, L. C., halogenated nitrobenzaldehydes and halogenated indigotins, A., i, 453.

Jantzen, Ernst. See Paul Rabe.

Jaquerod, Adrien, and Ch. Borel, variations of density of atmospheric air, A., ii, 635.

Jaschinowski, K. See Alfred Wohl.

Jassoy, H. See Adolf Sieglitz.

Jauch, Karl, specific heat of aqueous salt solutions, A., ii, 375.

Jeantet, P. See J. Duclaux.

Jeffery, F. H., the electrolysis of solu-

tions of sodium nitrite, using a copper anode, A., ii, 374.

Jencks, Zalia, carbohydrates of the root of the cat-tail (Typha latifolia), A., i, 913.

Jenisch, W. See Erich Tiede.

Jenkin, C. Frewen, and D. N. Shorthose, total heat of liquid carbon dioxides, A., ii, 485.

Jenkins, William Job, interaction of acetylene and mercuric chloride. II., T., 747.

Jenks, Clarence A. See Joel H. Hildebrand.

Jilek, Ant., titrations with potassium permanganate, A., ii, 712.

Jirsa, Fr., relationships at copper anodes in solutions of alkali hydroxides, A., ii, 298.

Joachimoglu, Georg, comparison of the actions of d-, l-, and i-camphor. IV. The action on the plain muscle of the leech, A., i, 146.

Joetten, K. W. See L. Haendel. Joffé, Ch. L. See Israel Lifschitz.

Joffe, J., and Edward Palmer Poulton, partition of carbon dioxide between plasma and corpuscles in oxygenated and reduced blood, A., i, 141.

Johns, Carl Oscar, and C. E. F. Gersdorff, the globulin of the cohune nut,

Attalea cohunc, A., i, 212.

Johns, Carl Oscar, and David Breese Jones, some amino-acids from the globulin of the coconut as determined by the butyl alcohol extraction method of Dakin, A., i, 65.

Carl Oscar, and Henry C. Waterman, some proteins from the mung bean, Phaseolus aureus, Roxburgh, A., i, 84.

Johns, Carl Oscar. See also David Breese Jones.

Johnson, Erling B., direct method for the estimation of dicyanodiamide, A., ii, 468.

estimation of dicyanodiamide and urea in fertilisers, A., ii, 605.

Johnson, Mary, dyes of the pyrazolone series, A., i, 690.

Johnson, Ruth. See Walter H. Eddy. Johnson, Treat Baldwin, and Elmer B. Brown, catalysis. I. Reduction of uracil to hydrouracil, A., i. 806.

Johnson, Treat Baldwin, and Frederick W. Lane, the preparation of some alkyl derivatives of resorcinol and the relation of their structure to antiseptic

properties, A., i. 340.

Johnson, Treat Baldwin, and Louis A. Mikeska, pyrimidines. LXXXIX. The condensation of benzamidine with ethyl γ -diethoxyacetoacetate, A., i, 57.

Johnston, Elmer H. See Farrington Daniels.

Jolibois, Pierre, Robert Bossuet, and Chevry, fractional precipitation, A., ii, 264.

Jolibois, Pierre, and Bouvier, the reversibility of the reaction CaCO₃ = CO₂

+ CaO, Å., ii, 438.

Jolles, Adolf, detection of very small quantities of indican (potassium indoxyl sulphate) in water as an aid to hygienic water analysis, A., ii, 69.

Jonas, K. G., the origin and chemical structure of coal, A., ii, 554.

Jones, A. J., detection and estimation of minute quantities of bromide in saline residues, and in a mixture of the halogens, A., ii, 516.

Jones, David Breese, and Carl Oscar Johns, hydrolysis of the globulin of the coconut, Cocos nucifera, A., i, 66.

Jones, David Breese, and Henry C. Waterman, the basic amino-acids of glycinin, the globulin of the soy bean, Soja hispida, as determined by van Slyke's method, A., i, 521.

Jones, David Breese. See also Carl

Oscar Johns.

Jones, F. R., and W. B. Tisdale, the effect of soil temperature on development of nodules on the roots of certain legumes, A., i, 914.

Jones, Frank Raymond. See Gilbert

Thomas Morgan.

Jones, Grinnel, and Walter Cecil Schumb, potential of the thallium electrode and the free energy of formation of thallous iodide, A., ii, 676.

Jones, J. Shirley, and D. E. Bullis, manganese in commonly grown legumes, A., i, 840.

Jones, Leslie Amiel. See Gilbert Thomas

Morgan.

Jones, Linus H., and John W. Shive, effect of ammonium sulphate on plants in nutrient solutions supplied with ferric phosphate and ferrous sulphate

as sources of iron, A., i, 838.

Jones, Martha R., and Lillian L. Nye, distribution of calcium and phosphoric acid in the blood of normal children,

A., i, 753.

Jonesco, Stan, the physiological rôle of the anthocyanins, A., i, 643.

the existence of anthocyanidins in the free state in the fruits of Ruscus aculeatus and Solanum dulcamara, A., i, 760.

Jorissen, Willem Paulinus, oxidation pressure limits. II. The pressure limit of autoxidation considered as a particular case of the inferior limit of explosion, A., ii, 99.

the existence of compounds in liquid mixtures, A., ii, 386.

the limiting pressure of autoxidation, A., ii, 688.

Junk, H. See Emil Ramann.

Justin-Mueller, Ed., differentiation of the extract of yellow wood (morin) and the extract of quercitron (quercitrin), A., ii, 69.

examination of urine pentoses, A., ii, 416. containing

K.

Kaden, H. See Aladar Skita. Kadlcová, (Mlle.) H., the empirical formula of Walden and the theory of Ghosh, A., ii, 680.

Kahlenberg, Louis, and George J. Ritter, catalytic hydrogenation of cottonseed oil, A., i, 302.

Kahn, M., and L. G. Hadjopoulos, estimation of calcium in blood, A., ii, 558.

Kalb, Ludwig, arsanthrene (diphenylenediarsine), A., i, 375.

Kameyama, Naoto, calcium cyanamide, A., i, 14.

the graphitic nature of the carbon of nitro-lime, A., ii, 697.

Kamio, Masumi. See Hidekichi Yanagisawa.

Kananow. Georg. See Jakob Meisenheimer.

Kanda, Sakyo, bioluminescence. The production of light by Luciola vitticollis is an oxidation process, A., i, 77.

bioluminescence. IV. The nature of the luciferase of Cypridina hilgendorfii, A., i, 530.

Kandell, М. See Joaquin Enrique Zanetti.

Kanô, Naotsuna, estimation of cyanides iodometrically with the aid of benzene, A., ii, 718.

Kapma, B. See Frans Maurits Jaeger. Kariyone, Tatsuo, and Yashiro Kimura, estimation of santonin in wormseeds, A., ii, 223.

Karr, Walter G., metabolism studies with diets deficient in water-soluble vitamin B, A., i, 75.

some effects of water-soluble vitamin

on nutrition, A., i, 75.

Karr, Walter G. [with Edward Tolstoi], comparative metabolism of proteins of

unlike composition, A., i, 475. Karrer, P., constitution of starch and

glycogen, A., i, 707. polysaccharides. XI. Compounds of anhydro-sugars with alkali hydroxides; a method of determining the parent compound of polymeric anhydro-sugars, A., i, 765.

chelerythrine, A., i, 801.

Karrer, P., Rosa Baumgarten, S.

Günther, W. Harder, and Lina Lang,

glucosides. IX., A., i, 260.

Karrer, P., and J. Ferla, hydroxy-V. Products of carbinol compounds. the action of cyanogen and hydrogen chloride on resorcinol and orcinol, A., i, 341.

Karrer, P., and O. Hurwitz, constitution of the sugar-acetones, A., i, 767.

Karrer, P., Walter Karrer, and J. C. Chao, plucosides. VIII. Glycyrrhizin. A., i, 259.

Karrer, P., Walter Karrer, H. Thomann, E. Horlacher, and W. Mäder, pieparation of amino-alcohols and cholines from natural amino-acids, A., i, 228.

Karrer, P., and Lina Lang, polysac-V. Methylation of inulin, charides. A. i, 312.

Karrer, P., and C. Nägeli, polysaccharides. II. Constitution of di-

amylose, A., i, 310. polysaccharides. IV. Degradation of potato starch, A., i, 311. polysaccharides. VI. Constitution of

starch and glycogen, A., i, 313.

Karrer, P., C. Nägeli, O. Hurwitz, and A. Wälti, polysaccharides. VIII. Starch and the amyloses, A., i, 768.

Karrer, P., and S. Rosenfeld, hydroxycarbonyl compounds. VI. Phloroglucinol and resorcinol ketones, A., i, 793.

Karrer, P., A. Rüdlinger, A. Glattfelder, and L. Waitz, syntheses in the bergapten group and of other hydroxycoumarone derivatives, A., i,

Karrer, P., and Alexander P. Smirnov, a new method for the preparation of

anhydro-sugars, A., i, 766.

Karrer, P., and Fr. Widmer, polysaccharides. III. Cellulose, A., i,

310. polysaccharides. VII. Constitution

of cellobiose, A., i. 397. polysaccharides. IX. Cellulose and

lignin, A., i, 771.

Karrer, P., Fr. Widmer, and Alexander Smirnov, polysaccharides. Anhydro-sugars of the trehalose type; diglucan and isodiglucan, A., i, 765. Karrer, Walter. See P. Karrer and

Alfred Werner.

Karssen, A. See N. H. Kolkmeijer. Karvé, D. D., and John Joseph Sudborough, additive compounds of mdinitrobenzene, A., i, 657.

Karvé, D. D. See also John Joseph Sudborough.

Karwat, Ernst. See Bernhard Neumann.

Káš, Václav. See Antonín Němec.

Katsch, Gerhardt, alcapton and acetone. II., A. i, 383.

Kauffmann, Hugo, combined auxochromes, A., i, 422.
Kaufmann, C. E. See A. M. Hjort.

Kauko. Yrjö, hydrolysis of cellulose, A., i, 771.

Kaupp, M. See R. Glocker.

Kautsky, Hans, some unsaturated silicon compounds, A., ii, 505.

Kawase, Sôjirô, Keiji Suda, and Akira chrysalis oil, Fukuzawa,

Kawase, Sôjirô, Keiji Suda, and Kakuji Saitô, the blood of the silk-worm, A., i, 379.

the digestive enzymes of the silk-worm, A., i, 381.

Kayser, E., influence of luminous radiations on a nitrogen-fixing organism, A., i, 79.

influence of luminous radiations on Azotobacter, A., i, 208, 291.

influence of uranium salts on nitrogen-fixing organism, A., 479.

influence of the nitrogenous material elaborated by Azotobacter on the alcoholic ferment, A., i, 642.

Keesom, W. H., the quadrupolar moments of the oxygen and nitrogen molecules, A., ii, 327.

Keeton, R. W. See Fred C. Koch.

Keffler, Leon Pierre George, some derivatives of anthraquinonedi-imide, T., 1476.

Kehrmann, Friedrich [constitution of pyronine, of salts of azo-compounds, and of pyrylium salts], A., i, 447.

constitution and colour. VII. Theory of quinonoid organic onium salts, A., ii, 476.

Kehrmann, Friedrich, and Takis C. Christopoulos, azthionium salts of the naphthalene series, A., i, 449.

Kehrmann, Friedrich, and Iwan Effront. salt-like additive products of the carbon double bond with acids, A.,

nitro-derivatives of phenazonium, A., i, 601.

Kehrmann, Friedrich, and Henri Goldstein, absorption spectra of certain nitro-derivatives of carbazine, phenoxazine, and thiodiphenylamine, A., i, 271.

Kehrmann, Friedrich, and Marie Ramm, 4-nitrophenazoxine, A., i, 128.

Kehrmann, Friedrich, Marie Ramm, and Ch. Schmajewski, coloured derivatives of tetraphenylmethane. III. New synthesis of carbazine [dihydroacridine] dyes, A., i, 600.

Kehrmann, Friedrich, and Maurice Sandoz, determination of the constitution of coloured substances from their absorption spectra, A., i, 276.

Keijzer, J. See 1. M. Kolthoff. Keilholz, A., detection of some metals and of arsenic in plant and human organs, A., ii, 708.

- Kelber, C., catalytic hydrogenation of organic compounds with common metals at the temperature of the laboratory; the activity of nickel catalysts prepared at different temperatures; influence of oxygen ou the nickel catalyst. IV., A., ii, 630.
 - catalytic hydrogenation of organic compounds by base metals at the atmospheric temperature. V. Influence of the nature and position of the halogens in organic haloid compounds on the removal of halogen by catalytic hydrogenation, A., ii, 688.
- Keller, Rudolf, dielectric constants of biochemical substances, A., i, 476. determination of the colloid charge,

A., ii, 14.

dielectric constants of colloidal solutions, A., ii, 682.

Kelley, Walter Pearson, and S. M. Brown, solubility of anions in alkali soils, A., i, 915.

Kelley, Walter Pearson, and A. B. Cummins, chemical effect of salts on soils, A., i, 388.

Kemble, Edwin C., probable normal state of the helium atom, A., ii, 478. helium and hydrogen models, A., ii, 632.

Kempf, Nikolaus, the reaction of potassium ammonium nitrate with soil, A., i. 915.

Kendall, E. C. See A. E. Osterberg. Kendall, James, molecular state of water vapour, A., ii, 106.

correlation of compound formation, ionisation, and solubility in solutions; outline of a modified ionisation theory, A., ii, 491.

Kendall, James, and Arthur W. Davidson, melting point of ammonium sulphate, A., ii, 334.

formation of compounds and solubility in systems of the type, sulphuric acid-metal sulphate, A., ii, 453.

Kendall, James, and Mary Louise Landon, the formation of additive compounds between 100 % sulphuric acid and the normal sulphates of the

alkali metals, A., ii, 45.

Kendall, James, and Kenneth Potter Monroe, viscosity of liquids. ideality of the system, benzene-benzyl benzoate and the validity of the Bingham fluidity formula, A., ii,

Kennaway, Ernest Laurence, method for the estimation of urea by soja-bean, A. ii, 70.

Kennaway, Ernest Laurence. See also H. W. Davie.

Kennedy, Cornelia.See Leroy S. Palmer.

Kenner, James, and Wilfrid Victor Stubbings, a second form of 6:6'-dinitrodiphenic acid, and its conversion into new cyclic systems, T., 593.

Kenner, James, and Ernest Witham, the influence of nitro-groups on the reactivity of substituents in the benzene nucleus. IV. The con-densation of ethyl 3- and 5-nitro-2chlorobenzoates with hydrazines, T., 1053.

the influence of steric factors on intramolecular condensation, T., 1452.

Kenner, James. See also Harold Burton.

Kercher, Franz. See Kutt Brand. Kerl, W. See W. Hausmann. Kermack, William Ogilvy, William Henry Perkin, jun., and Robert Robinson, harmine and harmaline. V. The synthesis of norharman, T., 1602.

See John Arthur Kern, Erwin J. Wilson.

Kessler, H. G. See Friedrich Meyer. Keys, David A., a piezoelectric method of measuring explosion pressures, A., . ii, 628.

Kharasch, Morris S., 5-iodo-3-nitro-4hydroxybenzoic acid and the mercury derivative of m-nitro-p-hydroxyphenylcarbinol, A., i, 510.

Kharasch, Morris S., and Lyman Chalkley, jun., mercuri-organic de-rivatives. II. Nitrobenzene mercury compounds; an indirect method of mercurising organic compounds, A., i, 377.

Kharasch, Morris S. See also Julius Stieglitz.

Khorozian, Krikor G. See Elbert IV. Rockwood.

Kiefer, F. See Walther Dilthey.

Kiess, C. C., and W. F. Meggers, wavelengths longer than 5500 Å. in the arc spectra of seven elements, A.,

Kiessling, Werner, comparative experiments on the action of some chlorine derivatives of methane, ethane, and ethylene on isolated frog's heart, A., i, 382.

Kiliani, Heinrich, new observation on the chemistry of the sugars. I., A., i,

Kimball, J. Willard, Richard L. Kramer, and Ebenezer Emmet Reid, the iodometric estimation of mercaptans, A., ii, 464.

Kimura, Kenjirô. See Yûji Shibata.

Kimura, Masamichi, the spectrum of bromine. I. Line and band spectra, lines of arc and spark types, and the relations between the lines, A., ii, 140.

the spectrum of bromine. II. Line structures and the Zeeman effect,

A., ii, 141.

the distribution of charged ions in the path of an electric discharge through a tube containing bromine vapour, A., ii, 141.

arc and spark lines of iodine, A., ii, 142.

figures produced by crystallisation of potassium dichromate, A., ii, 200.

Kimura, Masamichi, and Mitsuharu Fukuda, spectrum of chlorine. I. Emission and absorption spectra, A., ii, 140.

spectrum of chlorine. II. The influence of magnetic fields on spectral lines of chlorine, A., ii, 140.

Kimura, Yashiro. See Tatsuo Kariyone. Kinch, Edward, obituary notice of, T., 2123.

Kinder, H., estimation of phosphorus in iron, steel, ores, and slags, A., ii, 594.

Kindler, Karl, preparation of glyoxal by the action of acetylene on gold chloride or bromide, A., i, 396.

Kindler, Karl, and Walter Dehn, thioamides. II. Reduction of thioamides to primary amines, A., i, 510.

Kindler, Karl, and Friedrich Finndorf, thioamides. I. Preparation of thioamides with the aid of aluminium sulphide, A., i, 509.

King, Arthur S., intensity differences in furnace and are among the component series in band spectra, A., ii, 610.

the variation with temperature of the electric-furnace spectrum of manganese, A., ii, 612.

King, Charles G. See Alexander Lowy. King, Harold, derivatives of sulphur in commercial salvarsan. I. and II., T., 1107, 1415.

King, Harold. See also Hugh William Acton, and Robert George Fargher.

King, Joseph Edgar. See Abu Mohamed Bakr.

King, J. Fitch, density of hydrochloric acid, A., ii, 326.

King (Miss) Ruth, production of pieric acid from the sulphonic acids of phenol, T., 2105.

Kingsbury, Francis B., and W. W. Swanson, rapid method for the estimation of hippuric acid in urine, A., ii, 662.

Kinkead, R. W., the new indicator, A., ii, 124.

Kinne, Georg. See Ernst Koenigs.

Kipping, Frederick Stanley, organic derivatives of silicon. XXIV. dl-Derivatives of silicoethane, T., 647.

Kipping, Frederic Stanley, and James Edwin Sands, organic derivatives of silicon. XXV. Saturated and unsaturated silicohydrocarbons, Si₄Ph₈, T., 830.

organic derivatives of silicon. XXVI. Piperidine as an analytical reagent,

T., 848.

Kircher, A., and F. von Ruppert, estimation of arsenic in neosalvarsan [salvarsan, etc.], A., ii, 130.

Kirchhof, F., action of concentrated sulphuric acid on natural and artificial varieties of caoutchouc, A., i, 116.

periodic system of the elements from the point of view of the theory of radioactive disintegration, A., ii, 103. antimony pentasulphide (sulphur auratum), A., ii, 206.

Kirn, Max, dispersion of hydrogen in the ultra-violet, A., ii, 285.

Kirsch, Gerhard, radioactive facts and nuclear structure, A., ii, 150. structure of some compounds, A., ii, 193.

Kirschbaum, Georg. See Julius von Braun. Kittl, Th. See Ludwig Moser.

Kjelsberg, F. See Hermann Staudinger. Klänhardt, F. See Adolf Windaus.

Klason, Peter, the cellulose content of spruce wood, A., i, 840. iodometric estimation of copper, A., ii, 133.

Klauber, Albert, titanium hydride, A., ii, 513.

Klauber, Albert, and Julius Mell von Mellenheim, the existence of a gaseous hydride of thorium, A., ii, 206.

Klein, Oskar, and S. Rosseland, collisions between atoms and free electrons, A., ii, 291.

Klein, Oskar, and Olof Svanberg, freezing points of binary aqueous solutions of electrolytes, A., ii, 375.

Klein, Paul, precipitation of colloids by non-electrolytes, A., ii, 684.Klein, Paul. See also Isidor Traube.

Klein, Richard. See Emil Fromm.

Kleinmann, Hans, a new nephelometer and the principles of nephelometric measurements, A., ii, 56.

Klemene, Alfons, the behaviour of an unattackable electrode in the reaction 3HNO₂ ≥ 2NO + HNO₃ + H₂O at equilibrium, A., ii, 297.

negative hydrogen ions, A., ii, 692.

Klemenc, Alfons, and Friedrich Pollak. the oxidation of arsenious acid by nitric acid in presence of mercuric ions; the change of a negative catalyst to a positive, A., ii, 442.

Klemp, G., and J. von Gyulay, colloidal arsenates. II. Cadmium arsenate

jellies, A., ii, 507.

Klencke, H. See T. Schmiedel.

Klett, Robert E. See Philip Adolf Kober.

Kletzl, E. A. See Kurt Hess.

Klever, Helmut Wilhelm. See Hermann Staudinger.

Kling, André, and Daniel Florentin, properties and constitution of the group (O·CCl₃), A., i, 90. Klinger, R. See E. Herzfeld.

Klooster, H. S. van, nitroso-R-salt; a new reagent for the detection of cobalt. A., ii, 415.

Knaffi-Lenz, Erich von, simple method of preparing ultra-filters, A., ii, 93.

gold sols, A., ii, 342.

Knaggs, (Miss) Isabel Ellie, and Richard Henry Vernon, organic derivatives of tellurium. III. Crystallographic and pharmacological comparison of the a- and B-dimethyltelluronium dihaloids, T., 105.

Knape, \dot{E} , the extraction of tannin (gallotannic acid), A., i. 353.

Knebel, E. See Robert Stollé.

Knibbs, Norman Victor Sydney, and H. Palfreeman, the theory of electrochemical chlorate and perchlorate formation, A., ii, 396.

Knipping, P. See J. Franck.

Knoch, Frieda. See Johannes Gadamer.

Knöpfer, Gustav, action of hydrazine on chloral hydrate, A., i, 158.

Knoevenagel, Emil [with Otto Jäger], I. Preparation of aliketo-anils. phatic keto-anils and fission of ketoanil alkyliodides by alkali, A., i, 785.

Knoevenagel, Emil, and Albert Bregen-

zer, nature of the swelling process. III., A., i, 709.
nature of the swelling process. IV.
Swelling and internal friction in the system, cellulose acetate-nitrobenz-

ene-alcohol, A., i, 710.
nature of the swelling process. V.
Swelling and partition in the system, nitrobenzene-alcohol-cellulose acet-

ate, A., i, 771.

Knoevenagel, Emil, and Otto Eberstadt, nature of the swelling process. I.,

A., i, 402.

Knoevenagel, Emil, and Robert Motz. nature of the swelling process. II., A., i, 709.

Knoevenagel, Emil, and G. Oelbermann. citral series; optical determination of the constitution of compounds of the citral series, A., i, 865.

Knowles, Chester L., the preparation of p-diphenylpropiolic acid; and new reactions of diphenyl and its deriva-

tives, A., i, 417.

Knudson, Arthur, relationship between cholesterol and cholesterol esters in the blood during their absorption, A., i. 474.

Kobayashi, Kiuhei, formation of petroleum from fish oils; origin of Japanese petroleum, A., i, 297.

Kobel, Maria. See Heinrich Biltz.

Kober, Philip Adolph, and Robert E. Klett, further improvements in the nephelometer-colorimeter, A., ii, 555.

Koch, Fred C., Arno B. Luckhart, and R. W. Keeton, gastrin. V. The R. W. Keeton, gastrin. chemical investigation of substances present in gastrin, A., i, 74.

Koch, Peter Paul. See Walther Ehlers. Kochmann, M. [with C. Lucanus and R. Multhaupt], the magnesium-calcium and the barium-sulphate antagonism, A., i, 147.

Kodama, Shintarô, odorous constituents of apples; esters derived from leucic acid, A., i, 220.

the thiocarbimide reaction. I., A., i, 237.

Kögel, P. R., primary effect of light and photochemical valency, A., ii, 289. Köhler, Arnold. See Wilhelm Schneider.

Köhler, Erich, physiology of the yeast cell, A., i, 81. course of alcoholic fermentation by

yeast. II., A., i, 81. enzyme formation, A., i, 150.

Köhler, K. See W. König.

Köhler, Ludwig. See Kurt Brass.

Köller, Carola, volume changes of tin amalgams, A., ii, 341.

Koelsch, H., estimation of nickel and copper on nickel-plated or copper-

plated iron articles, A., ii, 597.
König, W., and K. Köhler, aromatic acylamines as azo-components, A., i,

König, W., and O. Treichel, constitution of the cyanines, A., i, 738.

Koenigs, Ernst, and Walter Jaeschke. synthesis of 4-alkylpyridines, A., i, 593.

Koenigs, Ernst, and Georg Kinne, 4-pyridyl mercaptan and pyridine-4-sulphonic acid, A., i, 594.

Koenigs, Ernst, and Walter Ottmann, partial synthesis of homocincholeupone and certain cyclopentanetrione derivatives, A., i, 595.

Koenigsberger, Johann Georg, and Wolf Johannes Müller, synthetic silicate minerals, A., ii, 459.

Köpcke, (Frl.) Paula. See Eugen Bamberger.

Koers, C. H. See J. C. van der Harst.

Kohen, Wilhelm, apparatus for the estimation of carbon dioxide (in carbonates), A., ii, 710.

Kohler, Bohdan, iodometrić studies. The estimation of iodine by titration with sodium thiosulphate, A., ii, 410.

(Mlle.) Denise, variation Kohler, organic acids in the course of anthocyanic pigmentation, A., i, 484.

Kohlschütter, Volkmar, and A. Frumkin, decomposition of hydrocarbons by canal rays, A., i, 405.

Kohlschütter, Volkmar, and A. Nägeli, topochemical reactions; formation of carbon at contact substances, A., ii,

Kohlschütter, Volkmar, and H. Stäger, electrode reactions; contractometric observations at anodes, A., ii, 619.

Kohlweiler, Emil, formation of elements and structure of the atomic nucleus, A., ii, 689.

Kohn, Adolf. See Emil Fromm.

Kohn, H., heat of sublimation of carbon, A., ii, 302.

Kohn-Abrest, Emile, general method for the detection and estimation of arsenic, A., ii, 130.

Kolhörster, Werner, the enumeration and range of the recoil atoms of thorium-C and thorium-C', A., ii,

Kolkmeijer, N. H., J. M. Bijvoet, and A. Karssen, investigation by means of X-rays of the crystal structure of sodium chlorate and sodium bromate, A., ii, 200.

Kolkwitz, R., pressure developed by alcoholic fermentation, A., i, 757.

Koller, microchemical reaction of morphine, A., ii, 71.

Koller, Paul, dolomite from Binn, Switzerland, A., ii, 701. Kollo, Constantin, new process for the

separation and estimation of iron and manganese, A., ii, 218.

Kollo, Constantin, and O. Lascar, estimation of formaldehyde, A., ii, 526.

Kollo, Constantin, and (Mlle.) Virginie Teodossiu, microchemical identification of gaseous ammonia as hexamethylenetetramine picrate, A., ii, 214.

Kollo, Constantin. See also Stefan Minovici.

Kolossovsky, Nicolas de, the phenomenon of partition, A., ii, 440.

Kolshorn, Erich, preparation of derivatives of p-aminophenol and of its O-alkyl ethers, A., i, 413.

Kolthoff, I. M., the importance of adsorption in analytical chemistry, A., ii, 19.

indication of the acid and basic functions and their estimation, A., ii, 55.

the titration of potassium iodide with mercuric chloride, A., ii, 57.

the calculation and estimation of active carbonic acid in drinking water, A., ii, 59.

the volumetric estimation of barium and strontium as chromates, A., ii,

the separation of barium, strontium, and calcium by the chromate method, A., ii, 63.

titration of lead as lead chromate, A., ii, 64.

the importance of adsorption in analytical chemistry. III. The adsorption of acid by filter paper, A., ii,

the application of conductivity titrations in analysis, A., ii, 124.

the importance of adsorption in analytical chemistry. IV. The adsorp. tion of alkalis by cellulose. V. The adsorption of salts of the alkali and alkaline earth metals and of alkaloids by filter paper, A., ii, 213.

iodometric estimation of chromic acid, A., ii, 219.

importance of adsorption in analytical chemistry. VI. Adsorption of lead and copper by filter-paper, A., ii, 276.

the importance of adsorption in analytical chemistry. VII. The adsorption of silver, mercury, and other metals, A., ii, 277.

the importance of adsorption in analytical chemistry. VIII. The adsorption of asbestos, A., ii, 344.

the estimation of the adsorbing power of charcoal, A., ii, 383.

the importance of adsorption in analytical chemistry. IX. Glass as a filter material, A., ii, 409. IX. Glasswool

estimation of the hydrogen-ion concentration of potable water, A., ii,

iodometric estimation of arsenic acid, A., ii, 463.

the estimation of bases combined with weak or moderately strong acids and of very weak bases with acids and vice versa, A., ii, 465.

Kolthoff, I. M., bromometric estimation

of salicylic acid, A., ii, 466. determination of hydrogen-ion concentration by means of indicator papers, A., ii, 515.

titration of bases combined with weak acids, and of very weak bases with acids, and vice versa, A., ii, 516.

argentometric titration of iodides, A., ii, 517.

estimation of the hydrogen-ion concentration in water by a colorimetric method, A., ii, 555.

the potentiometric titration of iodides by means of permanganate, A., ii,

555.

a simple method for the preparation of sodium hydroxide solution free from carbonate, A., ii, 705.

acidimetric estimation ammonium salts with formalin, A., ii, 711.

the iodometric determination of iron, A., ii, 713.

Kolthoff, I. M., and J. C. van Dijk, the volumetric estimation of zinc, A., ii,

Kolthoff, I. M., and J. Keijzer, the analysis of mercuric chloride, A., ii,

Kolthoff, I. M. See also Nicolaas Schoorl.

Kon, George Armand Robert, the formation and stability of spiro-IV. Ketones derived compounds. from open-chain and cyclic glutaric acids, T., 810.

Kon, George Armand Robert, and Arnold Stevenson, the formation of derivatives of tetrahydronaphthalene from

γ-phenyl fatty acids, T., 87. Kon, George Armand Robert. See also Stanley Francis Birch.

Kondô, Hajime. See HidekichiYanagisawa.

Kondô, Heisaburô, and Umetarô Amano, constituents of the Corean ginseng.

Kondô, Heisaburô, and Shinichi Satô, constitution of matrine. I., A., i,

Kondô, Kinsuke, constituents of Pelvetia Wrightii, A., i, 387, 840.

Konno, Kosuke, metallographic investigation of the system, antimony sulphide-silver sulphide, A., ii, 206.

Konno, Seibei, determination of the electrical resistance of alloys of leadtin and lead-zinc at high temperatures, A., ii, 425.

Konowalowa, A. A. See Alexei E. Tschitschibabin.

Konowalowa. R. A. See Alexei E. Tschitschibabin.

Konrad, Erich. See Robert Schwarz.

Korczyński, Antoine, the catalytic action of certain metallic salts in reactions of organic compounds, A., ii, 445.

Korczyński, Antoine, and W. Mroziński, the catalysts in the reaction between carbon monoxide, hydrogen chloride, and aromatic hydrocarbons, A., i, 567.

Korczyński, Antoine, and S. Piasecki, reduction of certain aromatic nitrocompounds by ammonium sulphide, A., i, 517.

Korevaar, A., chemical affinity, A., ii, 440.

Kornfeld, Gertrud, decomposition of hydrogen peroxide in ultra-violet light, A., ii, 670.

Kossel, Walther, the development of the Röntgen spectral series with increasing atomic number, A., ii, 138.

Kostychev, S., the formation of sugar by moulds from substances which are not sugars, A, i, 83.

Kostychev, S., and Paul Eliasberg, the character of the potassium compounds in living plant tissue, A., i**, 8**3.

alcoholic fermentation. X. Fermentation is life without oxygen, A., i, 150.

Kostychev, S., and L. Frey, alchoholic VIII. Influence of fermentation. zinc chloride on the alcoholic fermentation of living and killed yeast, A., i, 149.

ostychev, S., and S. Subkova, alcoholic fermentation. IX. Influ-Kostychev, ence of cadmium and zinc salts on

the yeast enzymes, A., i, 149.

Kostychev, S., and E. Tsvetkova, the utilisation of nitrates by moulds for the production of nitrogenous compounds, A., i, 83.

Kotyga, Gertrud.See Bernhard Neumann.

Kozawa, Shuzo, and Nobu Miyamoto, permeability of the red corpuscles for amino-acids, A., i, 474.

Kozlowski, Antoine, the saponarin in Mnium cuspidatum, A., i, 840.

Krämer, Felix. See Arthur Hantzsch.

Kramer, Benjamin, and Frederick F. Tisdall, clinical method for the quantitative estimation of potassium in small amounts of serum, A., ii, 412.

a simple method for the direct estimation of sodium in small amounts of serum, A., ii, 463.

Kramer, Benjamin and Frederick F. Tisdall, simple technique for the estimation of calcium and magnesium in small amounts of serum, A., ii, 595.

Kramer, Benjamin. See also Frederick F. Tisdall.

Kramer, Richard L., and Ebenezer Emmet Reid, the catalytic preparation of mercaptans, A., i, 389.

Kramer, Richard L. See also J. Willard Kimball.

Kramers, H. A., influence of an electrical field on the fine structure of the hydrogen lines, A., ii, 139.

Krasinska, Zofia. See Jakob K. Parnas. Kratzer, A., spectroscopic confirmation of the isotopes of chlorine, A., ii, 140, 361.

ultra-red rotation spectra of the hydrogen haloids, A., ii, 142.

Kraus, Charles August, solutions of metals in non-metallic solvents. VI. The conductivity of the alkali metals in liquid ammonia, A., ii, 370.

Krause, Erich, the action of unimolecular formaldehyde on Grignard's compounds, A., i, 647.

Krause, Erich [with G. S. Reissaus], lead triaryl, a parallel to triphenylmethyl. II. Lead tricyclohexyl, A., i, 825.

Krauss, F, hexachlororuthenates [ruthenichlorides], A., ii, 514.

Krauss, F., and H. Tampke, simultaneous detection of tartaric acid, oxalic acid, and formic acid by resoreinol and sulphuric acid, A., ii, 466.

Kreidl, I. See Walter Herzog.

Kreis, Hans, and Josef Studinger, the calcium content of egg-white, A., i, 905.

Kreitmann, Louis. See Auguste Rilliet.
 Kremann, Robert, electromotive properties of certain binary alloys. I. Theoretical considerations, A., ii, 10.

Kremann, Robert, and Julius Fritsch, influence of substitution in the components on equilibria in binary solutions. XXX. The binary systems of diphenylmethane with phenols and amines, A., i, 662.

Kremann, Robert, Julius Fritsch, and Richard Liebl, the electromotive behaviour of some binary alloys. XVI. Alloys of bismuth with sodium and potassium, A., ii, 342.

Kremann, Robert, and Julius Gmachl-Pammer, electromotive properties of certain binary alloys. III. Electromotive behaviour of cadmium-antimony alloys, A., ii, 156.

Kremann, Robert, and Julius Gmachl-Pammer, electromotive properties of certain binary alloys. V. Electromotive behaviour of tin-sodium alloys, A., ii, 158.

Kremann, Robert, and Heinz Hohl, influence of substitution in the components on equilibria in binary solutions XXIX. The binary systems of m-aminophenol with amines, A., i, 662

Kremann, Robert, and Albert Lobinger, electromotive properties of certain binary alloys. IV. Electromotive behaviour of alloys of thallium with zinc, lead, bismuth, tin, autimony, and cadmium, A., ii, 157.

Rremann, Robert, Egbert Lupfer, and Othmar Zawodsky, influence of substitution in the components on equilibria in binary solutions. XXVII. The binary systems of m- and p-aminophenol and phenols or nitro-compounds, A., i, 561.

Kremann, Robert, and Ernst Preszfreund, the electromotive behaviour of some binary alloys. XV. Alloys of potassium with lead, tin, and thallium, and of sodium with antimony, A., ii, 332.

Kremann, Robert, and Helmut Ruderer, electromotive properties of certain binary alloys. II. Electromotive behaviour of silver-cadmium alloys, A., ii, 11.

Kremann, Robert, and Robert Wittek, the electromotive behaviour of some binary alloys. XVII. Antimonyselenium alloys and their metallographic investigation, A., ii, 342.

Kremann, Robert, and Othmar Zawodsky, influence of substitution in the components on equilibria in binary solutions. XXVIII. The binary sys:em of 2:4-dinitrophenol with the three isomeric phenylenediamines, A., i, 601.

Kremers, E., and R. Kremers, chemistry of the heptane solution. II. Revision of the physical constants of heptane, A., i, 705.

Kremers, R. See E. Kremers.

Krepelka, Henry. See Theodore William Richards.

Krethlow, Alfred. See Hans Rupe.

Kretzschmann, Hugo. See Gustav Heller.

Krieble, Vernon K., and Walter W.
Wieland, the properties of hydroxy-nitrilase, A., i, 283.

Krishna, Sri, phenolcoumarein and resorcinolcoumarein, T., 1420.

Krishna, Sri, and Frank George Pope, the condensation of m-dimethylaminophenol with benzaldehyde, T., 286.

phenolcitraconein, T., 289.

Kröhnert, Erich. See Otto Ruff.

Kroll, S. See Carl Mannich.

Kronstein, Abraham, halogen substitution reactions, A., i, 153.

Krüger, Karl. See Robert Wintgen.

Krüger, Thea, work of ionisation and dissociation of hydrogen, A., ii, 236. Kruisheer, C. I. See Ernst Cohen.

Kruyt, Hugo Rudolph, low concentrations in colloid chemistry, A., ii, 577.

Kruyt, Hugo Rudolph, and A. E. van Arkel, the velocity of flocculation of the selenium sol. I. Flocculation by means of potassium chloride, A., ii, 25.

the velocity of flocculation of selenium sol. II. Flocculation by means of barium chloride, A., ii, 312.

Kruyt, Hugo Rudolph, and C. F. van Duin, heterogeneous catalysis and adsorption, A., ii, 392.

Krzikalla, Hans. See Heinrich Biltz. Kubota, Bonasuke. See Paul Sabatier. Külz, Fritz, colloidal arsenic (and the pharmacological action of yellow arsenie), A., i, 289. Kürten, H. See Emil Abderhalden.

Küster, William, hæmatoporphyrin.

V., A., i, 200.

the prosthetic group of blood pigments. II. The influence of age on the blood pigment, A., i, 203. some new observations in the study of

bilirubin, A., i, 626.

Kuhlmann, Hans. See Erich Schmidt. Kuhn, W. See Leopold Ruzicka.

Kulenkampff, Albert. See Heinrich Wieland.

Kulp, W. L. See R. J. Anderson. Kumar, Kalikumar. See (Sir)

See (Sir) Praphulla Chandra Rây.

Kunau, Fritz. See Wilhelm Schneider. Kunz-Krause, Hermann, cause and com-position of the insoluble deposits in oil of mustard, A., i, 320.

Hermann, and Kunz-Krause, Manicke, elimination of carbon dioxide from organic compounds. IV. Fission of chloral hydrate by mercury acetate, mercury oxide, and certain other metallic oxides, A., i, 543.

Kurtenacker, Albin, the reaction between halogen cyanides and sodium thio-

sulphate, A., ii, 502.

Kurtenacker, Albin, and Albert Fritsch, the action of cyanide on tetrathionate, A., ii, 502.

Kurtenacker, Albin, and Albert Fritsch, new method for the estimation of thiosulphate in the presence of sulphite and tetrathionate, A., ii, 556.

Kuss, Ernst. See Alfred Stock.

Kutscher, Friedrich. See Dankwart Ackermann.

Kyropoulos, S., the detection of parts of different "nobility" in a piece of metal, A., ii, 154.

Laage, E. See Richard Stoermer.

Laar, Johannes Jacobus van, the theoretical determination of the vapourpressure equation for any substance from the density and coefficient of expansion at a given temperature (below the boiling point). I. Carbon, A., ii, 17.

critical constants of mercury and increase of molecular attraction on dissociation of double molecules.

I. and II., A., ii, 83.

critical temperature and pressure of some substances, A., ii, 83.

some relations between absolute critical temperatures of ebullition and fusion, A., ii, 622.

Labbé, H., and G. de Toni, methods of estimating calcium in the blood; experimental control of the methods of Jansen and of Marriott and Howland, A., ii, 655.

Labes, Richard, relation between the salting-out and precipitation-in-hibiting action of inorganic ions on protein solutions, A., i, 820.

displacement of the precipitation optimum of serum-albumin by alkaloids, dyes, and other organic electrolytes, and the action of non-electrolytes, A., i, 820.

Labourrasse. See Paul Pascal.

Labrouste, Henri, molecular transformations in thin films on the surface of water, A., ii, 18.

Lachman, Arthur, nitrotartaric acid, A., i, 303.

rapid volumetric method for estimating ethyl alcohol, A., ii, 355.

Alfred, Lacroix [Antoine François], chromohercynite, a new spinellide, from Madagascar, A., ii, 53.

Ladenburg, Rudolf, significance of continuous absorption and emission spectra in Bohr's theory, A., ii, 567.

Lämmerhirt, Elisabeth. See Karl von Auwers.

Laer, Marc H. van, the existence of emulsin and of lipase in malt extract. A. i. 488.

extract, A., i, 488.
the products of condensation of carbanide and formaldehyde, A., i, 499.

the condensation of benzene and chloral hydrate in the presence of aluminium chloride, A., i, 503.

action of hydrolytic diastases, A., ii, 445.

Lafitte, P. See H. Weiss.

Lagatu, H., the respective rôle of the three bases, potash, lime, magnesia, in cultivated plants, A., i, 214.

Laing, (Miss) Mary Evelyn, the hydration of the fibres of soap curd. III. Sorption of sodium palmitate, T., 1669.

Laird, J. Stanley, the chemical potential of phenol in solutions containing salts, and the toxicity of these solutions towards anthrax and Staphylococcus, A., i, 151.

the toxicity of mercuric chloride and its solubility in aqueous alcohol,

A., i, 291.

Laitakari, Aarne, minerals from the limestone quarries of Pargas, Finland, A., ii, 406.

Lal, Jiwan. See Bawa Kartar Singh. Lal, Miri. See Bawa Kartar Singh. Lamb, Arthur Beckett, and Gorton R.

Fonda, hydrolysis of dichloro- and hexa-aquo-chromic chlorides, A., ii, 444.

Lamb, Robert M. See John C. Hessler. Lambourne, Herbert. See William Hobson Mills.

Landé, A., dynamics of spatial atomic structure, A., ii, 189.

size of atoms, A., ii, 189.

cubical atoms, the periodic system and molecular structure, A., ii, 189.

anomalous Zeeman effect and series system for neon and mercury, A., ii, 669.

Landé, A. See also E. Madelung.

Lande, L. van der. See Andreas Smits.

Landon, Mary Louise. See James Kendall.

Landrieu, *Philippe*, the acid and polyacid salts of monobasic acids; monopotassium and monolithium dibenzoates, A., i, 109.

Lane, Frederick W. See Treat Baldwin Johnson.

Lang, H. See S. Lang.

Lang, Hermann. See Karl Schaum.

Lang, Lina. See P. Karrer.

Lang, S., and H. Lang, the influence of sodium fluoride on the action of pancreatic diastase, A., i, 282.

Langbein, Karl. See Hans Rupe.

Langecker, Hedwig, deuterokeratose obtained from horn by means of digestion with alkali, A., i, 137.

Langelius, E. W. See Sven Odén.

Langer, Alfons, a reaction of American wormseed oil, A., i, 259.

action of phosphoric oxide on salicylic

acid, A., i, 345.

Langfeldt, Einar, blood sugar regulation and the origin of the hyperglycæmias. I. Glycogen formation and glycogenolysis. II. Conditions of action of liver diastases. III. Theory, A., i, 473.

animal calorimetry. XVII. The influence of colloidal iron on the basal

metabolism, A., i, 754.

Langhans, A., behaviour of mercuric fulminate with various solvents, A., i, 99.

action of mercury fulminate on various metals and alloys, A., i, 652.

angle of slope; a new physical constant, A., ii, 39.

behaviour of sodium thioantimonate with certain metallic salt solutions, A., ii, 353.

characteristic reaction for the detection of mercury fulminate, A., ii, 359.

Langmuir, Irving, radiation as a factor in chemical action, A., ii, 31.

the structure of the static atom, A., ii, 689.

the structure of the helium atom, A., ii, 689.

Langmuir, Irving. See also Guy Bartlett.

Lanzenberg, A., and J. Duclaux, process for the purification of methyl alcohol, A., i, 298.

LaPorte, N. M., double nitrate of aluminium and potassium, A., ii, 699.

Lapworth, Arthur, latent polarities of atoms and mechanism of reaction with special reference to carbonyl compounds, A., ii, 543.

Lapworth, Arthur, and (Mrs.) Leonore Kletz Pearson, reduction of emulsified nitro-compounds. I. β-Phenylhydroxylamine from nitrobenzene, T., 765.

Lapworth, Arthur. See also Robert Downs Haworth.

Laquer, Fritz. See Gustav Embden.

Larmor, (Sir) Joseph, electro-crystalline properties as conditioned by atomic lattices, A., ii, 310.

non-radiating atoms, A., ii, 632. escapements and quanta, A., ii, 632.

Larsen, Esper S., and M. L. Glenn, minerals of the melanterite and chalcanthite groups; hydrous manganese and cobalt sulphates, A., ii, 54.

and cobalt sulphates, A., ii, 54. Larsen, Esper S., jun. See J. T. Pardee. Lascar, O. See Constantin Kollo.

Laska-Mintz, Emilia. See Jakob K. Parnas.

Lassieur, Arnold, rapid electro-analysis, A., ii, 651.

Lassieur, Arnold, and (Mme.) Arnold Lassieur, rapid electro-analysis of brass, A., ii, 712.

Lassieur, (Mme.) Arnold. See Arnold Lassieur.

Latimer, Wendell M., mass effect in the entropy of solids and gases, A., ii, 380. Lattey, Robert Tabor, dielectric constants

of electrolytic solutions, A., ii, 426. Lau, E. See E. Gehrcke.

Laubengayer, A. W., apparent irreversibility of the calomel electrode, Λ., ii,

Laudat, M., estimation of the azotæmic index, A., ii, 70.

estimation of urea in blood; actual state of the question, A., ii, 223.

Laude, G. See Robert Fosse.

Laue, M. von, determination of crystal structures by means of X-rays, A., ii, 626.

Launoy, L., and Y. Fujimori, local

anæsthetics, A., i, 79.

Launoy, L., and M. Léyy-Bruhl, a comparison of the action of benzene and cyclohexane on the formed elements of the blood, A., i, 204.

of the blood, A., i, 204.

Laurin, Ingvar. See Hans von Euler.

Lautenschläger, Ludwig, action of various lactones on worm muscles, A., i 907

Lawaczeck, Heinz, mechanism by which external temperature influences the lactacidogen content of frog's muscle, A., i, 529.

Lawrence, John V. See J. Arthur Harris.

Lax, E. See Marcello von Pirani.

LeBas, Gervaise, theory of molecular refractions. I., A., ii, 361.

theory of molecular refractions. II. Free and activated valencies, A., ii, 529.

Lebeau, P., and M. Picon, action of sodammonium on diphenylmethane, fluorene, and indene; dimethylfluorene, A., i, 660.

the estimation of bromine in salt waters, A., ii, 591.

Lebo, Robert B., properties of mixtures of isopropyl alcohol and water, A., i, 493.

Lecco, Alexander. See Augustin Bistrzycki.

Le Chatelier, Henri, the phase rule, A., ii, 31.

the double saline decompositions and their geometric representation, A., ii, 248.

Lecher, Hans, and Alfred Goebel, the valency problem of sulphur. V. Molecular weight of thiocyanogen, A., i, 853.

Lecher, Hans, and Kurt Simon, the valency problem of sulphur. IV. Arylthiol thiocyanates, A., i, 414.

the valency problem of sulphur. VI.

The sulphur analogues of the aromatic diazonium compounds, A., i, 860.

Lecher, Oskar. See Burckhardt Helferich.

Lechner, G. See W. Bothe.

Le Coultre, M. See Leopold van Itallie. Ledebt, (Mlle.) S. See W. Mestrezat.

Lederer, Karl, tri-o-anisyltelluronium salts, A., i, 108.

Lederle, P. See Felix Mach.

Ledig, P. G., inflammability of jets of hydrogen and inert gas (helium), A., ii, 111.

Leduc, [Sylvestre] Anatole, new equation of state of gases, founded on a knowledge of the internal pressures, A., ii, 429.

Lees, S., constant volume explosion experiments, A., ii, 428.

Legg, David Alliston. See Charles Weizmann.

Legrand, estimation of maltose or lactose in the presence of other reducing sugars (use of Barfoed's solution), A., ii, 355.

Le Grand, L., estimation of lactose in the presence of other reducing sugars, A., ii, 661.

Lehmann, Fritz. See Ernst Beckmann. Lehmann, Otto, the molecular directing force in liquid crystals, A., ii, 174.

the molecular forces operative in liquid crystals and their relation to known forces, A., ii, 175.

Lehmann, R. See Alfred Lottermoser. Leitmeier, Hans, carbonates. II., A., ii, 112.

Lemarchands, M_{\cdot} , the metallurgy of zinc, A., ii, 550.

Lemarchands, M. See also (Mmc.) M. Lemarchands.

Lemarchands, (Mme.) M., and M. Lemarchands, method of separating ferric, aluminium, and chromium hydroxides, A., ii, 351. Lemberger, Z. See Karol Dziewoński. Lemeland, P., the chemical and physiological investigation of the fats and lipoids of the blood, A., i, 633.

Lemmel, Leo. See Fritz Straus.

LudwigLemmermann, Otto, and Fresenius, estimation of soil acidity by means of the iodine method, A., ii, 516.

Lemoine, Georges, mutual reaction of oxalic acid and iodic acid. I., II., and

III., A., ii, 100, 500, 540.

Lenaizan, F. Beaulard de. and L. Maury, the conductivity of the solution of cupric ammonium citrate compared with that of copper sulphate, A., ii, 534.

Lenher, Victor, preparation of selenium oxychloride, A., ii, 109.

some properties of selenium oxychloride, A., ii, 256.

silicic acid, A., ii, 331.

Lenz, Emil, pharmacology of acridine and acridinium compounds, A., i,

Lenze, F., R. Pleus, and J. Muller, wood cellulose, A., i, 163.

Lepape, Adolphe. See Charles Moureu. Lepierre, Charles, a new type of mineral water; nitrated waters, A., ii, 704.

Lepierre, Charles. See also Alfredo Bensaude.

Lescœur, L. See H. Doublet.

Lespieau, Robert, action of βγ-dibromopropylene on magnesium isopropyl bromide, A., i, 490. preparation of true acetylenic hydro-

carbons from $\beta\gamma$ -dibromopropylene,

A., i, 656.

Lessing, Rudolf, fractional distillation with contact ring still-heads, A., ii,

Le Sueur, Henry Rondel, obituary notice of, T., 2125.

Le Sueur, Henry Rondel, and Cyril Christian Wood, the mechanism of the action of fused alkalis. II. The action of fused potassium hydroxide on phenylglyceric acid, T., 1697.

Leteur, F., decomposition of iron oxides, A., ii, 218.

Leuchs, Hermann, asymmetric transformation, A., i, 442.

Leuchs, Hermann, Emil Hellriegel, and Harry Heering, strychnos alkaloids. XXIX. Oxidation of cryptobrucinolone and its preparation from brucinolone-b, A., i, 883. Levaditi, C. See Robert Sazerac.

Levene, Phabus A., preparation and analysis of animal nucleic acid, A., i, 821.

Levene, Phæbus A., the structure of thymus-nucleic acid and its possible bearing on the structure of plantnucleic acid, A., i, 821.

the numerical values of the optical rotations in the sugar acids, A., ii,

Levene, Phæbus A., and E. P. Clark, d-ribohexosamic acids, A., i, 318.

Levene, Phæbus A., and J. López-Suarez, the chemical structure of chondridin, A., i, 230.

Levene, Phabus A., and Gustave Morris Meyer, preparation of galactonolactone, A., i, 392.

Levene, Phæbus A., and Gustave Morris Meyer [with I. Weber], phosphoric esters of some substituted glucoses and their rate of hydrolysis, A., i, 845.

Levene, Phæbus A., and Louis A. Mikeska, possible asymmetry of aliphatic diazo-compounds, A., i, 233.

Levene, Phæbus A., and Ida P. Rolf, III. Fatty acids lecithin. of lecithin of the egg yolk, A., i, 382. lecithin. IV. Lecithin of the brain, A., i, 476.

Levene, Phæbus A., and H. S. Simms, the liver lecithin, A., i, 842.

Levi, Giorgio Renato, volumetric estimation of aminonaphthol-mono- and -disulphonic acids, A., ii, 599.

Levin, (Miss) Esther. See Frederick Maurice Rowe.

Levine, V. E. See Sergius Morgulis.

Lévy, (Mlle.) Jeanne, some retropinacolic transpositions, A., i, 233.

semipinacolic and semihydrobenzoinic transpositions in the phenyldimethylglycol series; action of concentrated acids, A., i, 788.

the molecular transpositions in the series of alkylhydrobenzoins and of the analogous a-glycols, A., i, 860.

retropinacolic transpositions and the mechanism of these transpositions, A., i, 861. Lewandowski, M. See Ernst Waser.

Lewin, L., trinitrotoluene poisoning, A., i, 640.

Lewis, Gilbert Newton, and Merle Randall, thermodynamic treatment of concentrated solutions and applications to thallium amalgams, A., ii, 241.

activity coefficient of strong electrolytes, A., ii, 427.

Lewis, Howard B., synthesis of hippuric acid in the rabbit after exclusion of bile from the intestine, A., i, 382.

Lewis, Howard B. See also Adam A. Christman.

Lewis, William Cudmore McCullagh, and A. McKeown, radiation theory of

thermal reactions, A., ii, 623. Lewis, W. Lee., C. D. Lowry, and F. H. Bergeim, some derivatives of phenox-

arsine, A., i, 471.

Ley, Heinrich, and G. Pfeiffer, optical investigations of the constitution of aromatic amines, A., i, 335.

Léyy-Bruhl, M. See L. Launoy.

Lieb, Hans, aromatic diarsinic acids, and their reduction products. I., A., i, 696. Lieb, Hans, and Gustav Schwarzer,

condensations of aromatic diamines with phthalic anhydride. II., A., i, 690.

Lieben, Fritz. See Otto von Fürth. Liebisch, Theodor, and Heinrich Rubens, optical properties of some crystals in the long-wave infra-red spectrum.

III., A., ii, 232. Liebisch, Theodor, and Ehr. Vortisch, crystallisation in ternary systems of the chlorides of univalent and bivalent

metals. II., A., ii, 262. Liebl, Richard. See Robert Kremann. Liebreich, E., influence of chlorides on the decomposition voltage curve of chromic acid, A., ii, 678.

Liempt, J. A. M. van, the vapour pressure and sublimation curves for some important metals, A., ii, 165. the condition diagram of carbon, A., ii, 429.

Liesche, Otto. See Ernst Beckmann. Lifschitz, Israel, functions of chromophores. VIII. Chromophores of con-

jugated compounds, A., ii, 287. Lifschitz, Israel, and Ch. L. photochemical transformations in the triphenylmethane series and photoconcentration cells, A., ii, 365.

Lifschitz, Israel, and Ernst Rosenbohm, functions of chromophores. Optical properties of some heavy metal complexes. II., A., ii, 286.

Lifschütz, Isaac, the action of alcoholic sodium acetate solution on cholesterol

dibromide, A., i, 25. undecamethylenedicarboxylic acid as a degradation product of oleic acid,

A., i, 496.

Lilienfeld, Leon, preparation of alkyl sulphates, A., i, 299.

preparation of new derivatives of the carbohydrates (C₆H₁₀O₅)_n and their homologues, A., i, 650.

Lillie, Ralph Stayner, recovery of transmissivity in passive iron wires as a model of recovery processes in irritable living systems. I. and II., A., ii, 80, 152.

Lillig, R., occurrence of arsenic in soils and in vegetable and animal substances. and its forensic importance, A., i, 216.

Lilly, E. G. See Karl T. Compton. Limburg, A. E. Ræst van. See D

See D. de Miranda.

Lindeman, Johs., and Theodor Svedberg. stability relationships of platinum-

organo-sols, A., ii, 543. Lindh, Axel E. See Manne Siegbahn.

Lindsay, Walter L. See Homer Rogers. Lindsay Light Co., preparation of in-soluble thorium compounds [double metaphosphate and sulphate of thorium], A., ii, 266.
Ling, Arthur Robert, and Dinshaw

Rattonji Nanji, volumetric estimation of phenylhydrazine and its application to the estimation of pentosans and pentoses, A., ii, 601.

Lingen, J. Steph. van der, anisotropic

liquids, A., ii, 438.

X-ray and infra-red investigations of the molecular structure of liquid crystals, A., ii, 681.

Linke, B., action of the three isomeric ethylaminobenzoic acids on benzo- and tolu-quinones, A., i, 186.

Lipp, Peter, and C. Padberg, apotricyclol, a derivative of cyclopropanol and its ketonisation, A., i, 559.

Lippmann, Edmund Oskar von, botanical chemical notes, A., i, 86.

history of the knowledge of combustion,

A., ii, 107. "caput mortuum" again, A., ii, 553.

Lipschitz, Werner, the mechanism of the toxic action of aromatic nitrocompounds; the respiration problem of animal and plant cells, A., i, 203.

Little, Ernest, and Joseph Costa, iodometric method for the estimation of chromium in chromite, A., ii, 352.

Liverseege, John Francis, sugar calculations, A., ii, 714.

Lizins, John Leonard, method for the estimation of the acidity of coloured solutions, A., ii, 461.

estimation of small quantities of phosphate in glycerophosphates, A., ii,

joint use of two indicators in the titration of acids and bases, A., ii,

Lobinger, Albert. See Robert Kremann. Lockemann, Georg, a rotary burner, A.,

double arsenic tubes, A., ii, 594.

Loeb, Jacques, ion series and the physical properties of proteins. II., A., i, 136. chemical character and physiological action of the potassium ion, A., i, 145.

Loeb, Jacques, ion series and the physical properties of proteins. III. Action of salts in low concentration, A., i, 367.

chemical and physical behaviour of casein solutions, A., i, 367.

the colloidal behaviour of proteins, A., i, 368.

the Donnan equilibrium and the physical properties of proteins. I. Membrane potential. II. Osmotic pressure, A., i, 627.

Donnan equilibrium and the physical properties of proteins. III. and IV. Viscosity, A., i, 693, 822.

the proteins and colloid chemistry,

A., i, 819.

the reciprocal relation between the osmotic pressure and the viscosity of gelatin solutions, A., i, 822.

Loeb, L. Farmer, alveolar tension of carbon dioxide in the lungs; its importance for the regulation of breathing and for the estimation of acidosis in Diabetes mellitus, A., i, 378.

Loeb. Robert F., radioactivity and physiological action of potassium, A., i, 145. Loeb. Robert F. See also Walter W.

Palmer.

Loeper, M., R. Debray, and J. Tonnet, chemical modifications of the vagus nerve during digestion, A., i, 635.

Löwenheim, Helene. See Carl Mannich. Lombard, Maurice, detection of fluorescein in very dilute solutions, A., ii, 528.

Lo Monaco, Domenico, new method of hydrolysing proteins and tissues in the cold, A., i, 216.

Cyril Norman Hugh. Maurice Copisarow.

Long, Walter S. See Frank Burnett Dains.

Longchambon, Louis, the measurement of rotatory power in biaxial crystals, A., ii, 421.

rotatory power in crystalline media, A., ii, 531.

 $G_{\cdot, \cdot}$ and GabrielaLonginescu, G. detection of hydro-Chaborski, chloric acid in the presence of hydrobromic acid and hydriodic acid, A., ii, 410.

detection of nitric acid, A., ii, 411.

Longinescu, G. G., and G. P. Theodorescu, separation of the metals of the second group, A., ii, 413.

Longobardi, Ernesto, colour and optical activity in organic compounds, A., ii,

Longstaff, George Blundell, obituary notice of, T., 2127.

CXX. ii.

Loomis, F. W., infra-red spectra of isotopes, A., ii, 530.

López-Ŝuarez, J. See Phxbus A. Levene. Lorenz, Richard, the theory of electro-lytic ions. XIX. Determination of the size of the benzene nucleus from [electrical] conductivity, A., ii, 158.

theory of electrolytic ions. XX. Hertz's theory of ionic mobility, A., ii, 158.

the sizes of the kations of the alkali metals, A., ii, 191.

Lorenz, Richard, and Walter Herz, boiling-point relationships, A., ii, 433.

fused salts and the law of corresponding states, A., ii, 486.

atomic volume and molecular volume at the absolute zero, A., ii, 536.

Lorenz, Richard, and Wilhelm Michael. the theory of electrolytic ions. XXIII. The conductivity of some binary electrolytes; third test of Paul Hertz's theory of conductivity, A., ii, 482. Lorenz, Richard, and Wilhelm Neu,

the theory of electrolytic ions. XXII. The migration velocity of some ions; a second test of Paul Hertz's theory of ion conductivity, A., ii, 481.

Lorenz, Richard, and Philipp Osswald, the theory of electrolytic ions. XXI. A first proof of Hertz's theory of con-

ductivity, A., ii, 158.

Lorenz, Richard, and A. Scheuermann, the theory of electrolytic ions. XXIV. The conductivity of some neutral sodium salts of polybasic organic acids, A., ii, 482.

the theory of electrolytic ions. XXV. The apparent size of the anions of some aliphatic and aromatic polycarboxylic acids and of benzene, A., ii, 483.

ria, Stanislaw, volatilisation of thorium-B and thorium-C deposited on gold, A., ii, 294.

Loring, Frederick Henry, is H composed of a whole-number part (A) plus an auxiliary part (B) and a rotating electron (C)? A., ii, 102.

nickel isotopes, A., ii, 570. Lormand, Ch. See Maurice François. Losana, L. See F. Graziani.

Losanitch, Sima M., note on dithio-carbazinic acid, T., 763.

Lo Surdo, A., synthetic helium and neon. A., ii, 331.

Lottermoser, Alfred, constitution of "iodide of starch," A., i, 708.

Lottermoser, Alfred, and R. Lehmann, catalysis [of the decomposition] of hydrogen peroxide by colloidal manganese dioxide, A., ii, 688.

Lovelace, Benjamin Franklin, Joseph Christie Whitney Frazer, and V. B. Sease, the lowering of the vapour pressure of water at 20° produced by dissolved potassium chloride, A., ii, 239. Lovén, J. M., and R. Ahlberg, α -sul-

phodipropionic acid, A., i, 223. Low, A. H., stabilisation and standardisation of thiosulphate solution for the copper assay, A., ii, 133. volumetric estimation of mercury, A.,

ii, 134.

Lowe, P. See John Cunningham McLennan.

Lowry, C. D. See W. Lee Lewis.

Lowy, Alexander, and Emil Harold Balz, derivatives of 2:4:6-trinitrobenzaldehyde, A., i, 337.

Alexander, and Thomas B. Downey, derivatives of 2:4-dinitrobenzaldehyde. II., A., i, 337.

Lowy, Alexander, and Charles G. King, derivatives of p-nitrobenzaldehyde, A., i, 337.

See M. Kochmann. Lucanus, C. Luce, R., chemical reactions and radii of curvature, A., ii, 440.

Luckhart, Arno B. See Fred C. Koch. Ludwig, Eugène, a simple apparatus for the identification of gases evolved in the qualitative tests for acids, A., ii, 271.

microchemical analysis with reagents sensitised by saturation, A., ii, 271.

a new method for the detection of chlorine and bromine ions in the presence of iodine ions, A., ii, 273.

Ludwig, Eugène, and D. Butescu, microchemical analysis with reagents sensitised by saturation, A., ii, 271.

Ludwig, Eugène, and (Mile.) Hélène Spirescu, the detection of sodium and potassium ions in the presence of inagnesium ions; method, A., ii, 215. simplified

simplified methods of analysis in the calcium group, A., ii, 276. Ludwig, R. See Ernst Weitz.

Ludwig, Willy. See Fritz Mayer. Ludwig Semelić, Zdenka, the synthesis of oxazines and thiazines of the naphthalene series, A., i, 448, 689.

Lück, E. A., catalytic action of hydrogen peroxide on potassium ferro- and ferri-cyanides, A., i, 232.

Lüers, Heinrich, a general colloid test in cerebro-spinal fluid, and the use of congo-rubin in particular for this purpose, A., i, 75.

colour change of congo-rubin with time and the influence of electrolytes and protecting colloids, A., ii, 26.

Lüers, Heinrich, and M. Schneider, viscosity-concentration function of poly-disperse systems, A., ii, 86. measurement of solvation (swelling)

in colloids, A., ii, 175.

Lührig, H., quantity of hydrocyanic acid in the beans of Phaseolus lunatus, A., i, 387.

polarimetric estimation of starch, A., ii, 356.

micro-estimation of nitrogen, A., ii, 557.

Luff, G., separation of tin and antimony in hydrochloric acid solution by means of hydrogen sulphide, A., ii, 353.

Lumière, Auguste, Louis Lumière, and Alphonse Seyewetz, the developing properties of leuco-bases of dyes derived from rosaniline, A., ii, 615.

Lumière, Louis. See Auguste Lumière. Lund, Yeppa. See Joseph E. Greaves. Lundell, Gustav Ernst Fred, estimation of iron by the cupferron method,

A., ii, 414.

Lundell, Gustave Ernst Fred, and J. I. Hoffman, estimation of cobalt and nickel in cobalt steels, A., ii, 561.

Lundell, Gustave Ernst Fred. See also William Francis Hillebrand.

Lupfer, Egbert. See Robert Kremann. Luther, J. B., the Turner reaction for gurjun balsam, A., ii, 468.

Luther, Robert, separating funnel for quantitative extractions, A., ii, 270. Luttringer, A., preparation of terpinyl

esters, A., i, 116.

synthetic camphor, A., i, 116. Luttringer, A., and André Dubosc, preparation of bornyl formate, A., i, 115.

the action of formic acid on dry pinene hydrochloride, A., i, 115. Luttringer, A. See also Dubosc.

Lutz, Franz, volumetric estimation of alkali pyrophosphates, A., ii, 463.

Lutz [Jacob] Oskar, sensitiveness and applicability of qualitative reactions. II. Barium ions, A., ii, 596.

Lyding, Georg, lactacidogen-phosphoric acid and the residual phosphoric acid content in the muscles of fowls and pigeons, A., i, 529.

Lyman, Theodore. See Hugo Fricke. Lynch, Vernon, chemistry of whitefish sperm, A., i, 75.

Lyon, Nikolaus, and Fritz Wolfram, dependence of electrical double refraction on temperature, A., ii, 6.

Maass, Otto, sulphuric acid concentrator

and vacuum pump, A., ii, 104.

Maass, Otto, and W. H. Hatcher, properties of pure hydrogen peroxide. I., A., ii, 106.

Maass, Otto, and Otto W. Herzberg, properties of pure hydrogen peroxide. II., A., ii, 106.

Maass, Otto, and J. Russell, unsaturation and molecular compound formation,

II., A., i, 761.

Maass, Otto, and C. H. Wright, some physical properties of hydrocarbons containing two and three carbon atoms, A., i, 489.

a variable resistance, A., ii, 424.

Macallum, A. Douglas, examination of neoarsphenamine [neosalvarsan], A., ii, 420.

McAlpine, Roy K. See Hobart Hurd Willard.

McBain, James William, and Herbert Ernest Martin, the hydration of the fibres of soap curd. I. The degree of hydration determined in experiments on sorption and salting out, T., 1369.

McBain, James William, and Cyril Sebastian Salmon, the hydration of the fibres of soap curd. II. The dew-point method, T., 1374.

McBain, James William. See also W.

F. Darke.

Macbeth, Alexander Killen, gasometric estimation of hypochlorites, A., ii,

Macbeth, Alexander Killen, and David Doig Pratt, the halogen derivatives of nitroform, T., 354.

the labile nature of the halogen atoms in substituted nitromethanes, T.,

Macbeth, Alexander Killen. See also David Templeton Gibson, and Hugh Graham.

McCall, A. G., and J. R. Haag, the relation of the hydrogen-ion concentration of nutrient solutions to growth and chlorosis of wheat plants, A., i,

McCann, G. F. See A. F. Hess, and L. von Meysenbug.

McCarty, Arthur C. See Raymond L. Stehle.

McClelland, Ernest Wilson. See Samuel Smiles.

McClelland, John Alexander, and P. J. Nolan, the nature of the ions produced by phosphorus, A., ii, 8.

McClendon, J. F., hydrogen-ion concentration in the contents of the small intestine, A., i, 634.

methods of extracting and concentrating vitamins-A, -B, and -C, together with an apparatus for reducing milk, fruit juices, and other fluids to a powder without destruction of vitamins, A., i, 839.

McCollum, Elmer Verner, Nina Simmonds, P. G. Shipley, and E. A. Park, experimental rickets. VIII. Production of rickets by diets low in phosphorus and fat-soluble-A, A., i, 757.

McCollum, Elmer Verner. See also Margaret B. MacDonald.

McCombie, Hamilton. See Albert Eric Cashmore.

Macdonald, Alexander D. See James $\it B$. Conant.

MacDonald, Margaret B., and Elmer Verner McCollum, the cultivation of yeast in solutions of purified nutrients, A., i, 480.

MacDougall, Frank Henry, molecular heat of hydrogen, A., ii, 238.

McEllroy, William S., and H. O Pollock, the rate of nitrogen elimination, A., i, 531.

McEwan, Thomas Lawson. See James Irvine Orme Masson.

McGee, J. M., preparation and properties of sodamide, A., ii, 334.

Macgregor, A. M. See Arthur Hutchinson.

Mach, Felix, and P. Lederle, estimation of the alkaloid content of lupines, A., ii, 718.

Mach, Felix, and F. Sindlinger, source of error in the estimation of nitratenitrogen by Ulsch's method, A., ii, 594.

Macheleidt, R. WalterSee AdolfRoth.

Machens, A., and Fr. Cordes, apparatus for estimating the catalase content of milk, A., ii, 227.

MacInnes, Duncan A., hydrogen overvoltage, A., ii, 11.

ionic mobilities, ionic conductivities, and the effect of viscosity on the conductivity of certain salts, A., ii, 619.

MacIntire, Walter Hoge, F. J. Gray, and W. M. Shaw, non-biological oxidation of elementary sulphur in quartz media, A., ii, 327.

McKee, Ralph H., and Frank A. Strauss, synthesis of chlorine-free benzoic acid from benzene, A., i, 415.

McKellips, G. M., I. M. de Young, and W. R. Bloor, distribution of phosphoric acid in the blood of normal infants, A., i, 698.

McKenzie, Alexander, and Fred Barrow, **β-a**mino-β-phenylpropiophenone, T.,

McKenzie, Alexander, and John Scott Walker Boyle, action of magnesium phenyl haloids on diphenylchloroacetyl chloride; constitution of triphenylvinyl alcohol, T., 1131.

McKeown, A. See William Cudmorc

McCullagh Lewis.

McKie, (Miss) Phyllis Violet, determination of the composition of mixtures of eugenol and isoeugenol benzoates by means of melting points, T., 777.

McKie, (Miss) Phyllis Violet. See also

Kennedy Joseph Previlé Orton.

MacLachlan, Thomas, estimation of nitrates in bismuth salts by means of titanium chloride and Devarda's alloy, A., ii, 518.

MacLaughlin, John A. See Dirk Hendrik Brauns.

MacLean, (Mrs.) Ida Smedley, and Ethel Mary Thomas, abnormal iodine values with special reference to the sterols and resins, A., i, 565.

McLean, J., preparation of fibrinogen,

A., i, 467.

McLennan, John Cunningham, refractive indices of mercury and thallium vapours, A., ii, 665.

spectrum of ionised potassium, A., ii, 667.

McLennan, John Cunningham, and E. Evans, mobilities of ions in helium at high, pressure, A., ii, 478.

McLennan, John Cunningham, and P. Lowe, structure of the Balmer series lines of hydrogen, A., ii, 666.

McLennan, John Cunningham, and W. W. Shaver, emission and adsorption spectra of mercury, A., ii, 668.

McLennan, John Cunningham, and R. V. Zumstein, absorption and series

spectra of lead, A., ii., 474.

McLeod, Charles Maxwell, and (Mrs.) Gertrude Maud Robinson, researches on pseudo-bases. III. Dialkylaminomethyl alkyl ethers and sulphides, T., 1470.

McMaster, LeRoy, E. Bender, and E. Weil, the solubility of phthalic acid in water and in sodium sulphate solutions, A., i, 511.

See Andrew. Thomas McMillan, Stewart Patterson.

McNair, James B., lobinol—a dermatitant from Rhus diversilaba (poison oak), A., i, 387.

McRae, Duncan, and C. C. van Voorhis. vapour pressure of white phosphorus from 44° to 150°, A., ii, 328.

Macri, V., reaction of manganese salts, A., ii, 278.

MacTaggart, Alexander, the influence of certain fertiliser salts on the growth and nitrogen content of some legumes, A., i, 913.

Madelung, E., and A. Landé, a dynamical model of a cubical atom, A., ii,

Madelung, Walter, indigotin, A., i, 810. Madinaveitia, Antonio, and Fernando Diaz Aguirreche, catalytic action and micellar magnitude (degree of dispersion), A., ii, 390.

Madinaveitia, Antonio. See also J. R.

Carracido.

Madison, O. E.See F. E. Bartell.

Mäder, W. See P. Karrer.

Maestrini, Dario, enzymes. IV. emulsin, cytase, ereptase, and urease in germinating barley, A., i, 152. enzymes. V. Resistance of ptyalin to

the action of hydrochloric acid in the presence of starch, A., i, 281.

euzymes. VI. Protective action of starch and other substances on ptyalin in acid media, A., i, 628.

Magasanik, J. See Georg Wiegner.

Magne, H. See André Mayer.

Magness, J. R., composition of gases in the intercellular spaces of apples and potatoes, A., i, 759.

See Gilbert John Mahdihassan, S. Fowler.

Mahood, Samuel A., thermal decomposition of turpentine, with particular reference to the production of toluene and isoprene, A., i, 116.

Mailhe, Alphonse, catalytic preparation of secondary amines and attempts at alkylation of these bases, A., i, 237.

preparation of amines of secondary alcohols, A., i, 314.

catalytic hydrogenation of phenylhydrazones, A., i, 463.

halogen derivatives of methylethylbenzene, A., i, 502.

the catalytic decomposition of polyhalogenated aliphatic hydrocarbons, A., i, 534.

nitro-and amino-derivatives of methylethylbenzene, A., i, 661.

preparation of a petrol from a vegetable oil, A., i, 706.

petrol prepared from rape oil, A., i, 841.

Mailhe, Alphonse [with F. de Godon], certain catalytic reactions, A., ii, 391.

Mailhe, Alphonse, and F. de Godon, preparation of methyl derivatives of the xylidines and naphthylamines by catalysis, A., i, 108.

esterification by zirconium oxide, A., i, 219.

preparation of mixed secondary and tertiary phenolic amines, A., i, 504.

Mains, G. H. See Harrison Eastman Patten.

Maki, Toshio, the constitution of thiofluorescein and its technical applications, A., i, 183.

Makino, Komataro, electrical states of iodine vapour when emitting line and band spectra, A., ii, 142.

Mallanneh, Sreenagula, colour reaction

for aconite, A., ii, 470.

Mallemann, R. de, the rotatory power of tartaric and malic acids in solution, A., i, 7.

variation of the rotatory power of tartaric acid, A., i, 158.

the inversion of the rotatory power of derivatives of tartaric acid, A., ii, 614.

Malmy, M., a reaction to distinguish between the obromine and caffeine, A., ii, 360.

Malvezin, Philippe, and C. Rivilland, estimation of small quantities of iron in organic liquids, especially in wines, A., ii, 351.

Manchot, Wilhelm, the constitution of the mercury compounds of carbon monoxide and of ethylene. II., A., i, 329.

Mancini, Mario A., physiological action of ββ'-di-iodoisopropyl alcohol and of βγ-di-iodo-n-propyl alcohol, A., i, 289.

Mandal, Hj., abnormal aniline salts, A., i, 106.

aniline lead compounds, A., i, 410.

Manicke, Paul. See Hermann Kunz-Krause.

Mann, Frederick George, (Sir) William Jackson Pope, and Richard Henry Vernon, the interaction of ethylene and sulphur monochloride, T., 634.

Mann, Hubert, an apparatus for continuous dialysis or extraction, A., ii, 23

Mannich, Carl, and S. Kroll, phenacyland dihydroxyphenacyl-derivatives of theobromine and theophylline, and their corresponding secondary alcohols, A., i, 884.

Mannich, Carl, and Helene Löwenheim, two new reduction products of codeine, A., i, 124. Manning, Alexander Bernard, the influence of neutral salts on the hydrolysis of ethyl formate, T., 2079.

Manolesco, action of magnesium ethyl bromide on 1:3 dibenzylidene-2-cyclo-hexanone and 1:3-dibenzylidene-4-methyl-2-cyclohexanone, A., i, 513.

Maquenne, Léon, the estimation of small quantities of iron, A., ii, 561.

Maquenne, Léon, and Raoul Cerighelli, the distribution of iron in plants, A., i, 759.

Maquenne, Léon, and Ém. Demoussy, the respiration of leaves in a vacuum or in atmospheres poor in oxygen, A., i, 758.

the resistance of plants to asphyxia, A., i, 759.

Marcelet, H., hydrogenation of some marine animal oils, A., i, 646.

Marcelin, A., surface tension of unimolecular layers, A., ii, 488.

Marcellino, A. See Michele Giua. Marchal, (Mile.) G. See Camille

Matignon.
Marchetti, Paolo. See Umberto Shorgi.

Marck, J. L. B. van der, estimation of lecithin, A., ii, 526.
Marcusson, Julius, syntheses of humins

and humic acids, A., i, 313.
the structure of humic acids and coals,
A., ii, 590.

Marden, John W. See Mollie G. White. Margary, Ivan D., periodic table; a modification more in accord with atomic structure, A., ii, 543.

Margosches, Benjamin Max, and R. Baru, a modification of Aschman's method of determining the iodine value, A., ii, 716.

Marrack, (Miss) Muriel Tregarthen. See Tom Sidney Moore.

Marie, Charles, and William Albert Noyes, jun., new method of measuring electrolytic conductivity, A., ii, 426.

Marignac, C. de, hypotheses on the unity of matter, A., ii, 101.

Marsh, Joseph Kenneth. See George Gerald Henderson.

Marshall, A. G. See Henry Thomas Tizard.

Marshall, Eli Kennerly, jun., and John W. Williams, the toxicity and skin irritant effect of certain derivatives of $\beta\beta'$ -dichlorodicthyl sulphide, A., i, 207.

Marshall, J., a law of force giving stability to the Rutherford atom, A., ii, 322.

Martin, Félix, estimation, by acetylation, of borneol and its acylated derivatives, A., ii, 355.

Martin, Herbert Ernest. See James William McBain.

Martin, J. C. See D. R. Hoagland. Martinet, Jh., the colour of the indigoids, A., i, 273.

migration of the sulphonic acid group in aromatic molecules, A., i, 732.

Martinet, Jh., and P. Coisset, action of chloraloxime on aromatic amines; synthesis of isatins, A., i, 516.

Martinet, Jh., and O. Dornier, isatin-5sulphonic acid, A., i, 273. new sulphonated derivatives of oxin-

dole and isatin, A., i, 516.

Martinet, Jh., and A. Haehl, mm'-

dinitrodiphenylsulphone, A., i, 854. artinet, Jh. See also (Mile.) J. Bonnefoy, and (Mile.) A. Roux. Martinet, Jh.

Marvel, Carl S., and William Albert Noyes, the possible asymmetry of the

aliphatic diazo-compounds, A., i, 15. Marwitzky, Karl. See Heinrich Biltz. **Masing**, G., recrystallisation of metals; the recrystallisation of zinc, A., ii, 639.

Mason, Edward H., the absorption of calcium salts in man, A, i., 698.

Mason, Frederick Alfred, β-hydroxy-β-3:4-methylenedioxyphenylethylamine and its derivatives, T., 1077.

Massink, A., relation between certain constants in the system CO₂aq. -CaCO₃, A., ii, 59.

Masson, David Orme, the constitution

of atoms, A., ii, 191.

Masson, James Irvine Orme, and Thomas Lawson McEwan, analysis of liquid and gaseous mixtures of other, alcohol, and water, A., ii, 281.

Masson, James Irvine Orme. See also William Edward Garner.

Masucci, P. See F. M. Huntoon.

Matejka, Josef, colorimetric estimation of iron in silicates with ammonium thiocyanate, A., ii, 658.

Mathias, Emile, Claude Auguste Crommelin, and Heike Kamerlingh Onnes, the rectilinear diameter of hydrogen, A., ii, 256.

Mathieu, L., estimation of iron in wines, A., ii, 415.

estimation of small quantities of iron, A., ii, 561.

identification of tartaric acid in wines, A., ii, 662.

Matignon, Camille, reactions producing magnesium, A., ii, 262.

action of iodine in the cold on different metals; detection of the presence of chlorine in the atmosphere, A., ii, 272. principles of new methods applicable to the determination of molecular

weights, A., ii, 379.

Matignon, Camille, and M. Fréjacques, the transformation of ammonia into carbamide, A., ii, 33.

Matignon, Camille, and (Mlle.) G. Marchal, the use of enamelled bombs in calorimetry, A., ii, 379.

Matsubara, A., chemical equilibrium between iron, carbon, and oxygen, A., ii, 644.

Matsui, Motooki, and Tadasu Nakazawa, detection and estimation of nickel and cobalt, A., ii, 219.

Matsui, Motooki, and Shiu Shimizu, electrolytic reduction of menthone, A., i, 186.

Matsumiya, Kaoru, organic compounds of arsenic. I. Reaction between the Grignard reagent chloride, A., i, 70. and arsenious

Matsuno, Kichimatsu, coagulation of arsenious sulphide sols by cobaltic

complexes, A., ii, 637. stereochemical configuration of the aquo-triammine and diammine cobalt complex salts, A., ii, 644

Matsuno, Kichimatsu. See also William Edward Garner.

Mattaar, Th. J. F., the direct synthesis of carbamide by urease, A., i, 203.

Mattaar, Th. J. F. See also Jean Timmermans.

Mattick, Elfrida Constance Victoria, and Robert Stenhouse Williams, influences of reaction on colour changes in tryptophan solutions, A., i, 641.

See Maximilian Matula, Johann. Samec.

Matulka, N. See Ferdinand Henrich. Maue, G., detection of methyl alcohol in spirits, A., ii, 220.

detection of methyl alcohol, A., ii, 281. Mauguin, Ch., possible utilisation of the diagrams of diffraction of X-rays for the complete determination of the structure of quartz, A., ii, 681.

Mauguin, Ch., and Louis Jacques Simon, the preparation and some physical constants of cyanogen chloride, A., i, 232.

Beaulard de Maury, L. See F. Lenaizan.

Mauthner, Ferdinand, synthesis of 3:5dimethoxybenzaldehyde, A., i, 32. allyl derivatives of resorcinol and quinol, A., i, 726.

synthesis of pikamar, A., i, 726.

Mauzelius, R. See G. Aminoff. Max, Fritz. See Heinrich Biltz.

Maxted, Edward Bradford, the influence of mercury, sulphur, arsenic, and zinc on the catalytic activity of platinum, T., 225.

Maxted, Edward Bradford, on the relation between the occlusive power of palladium for hydrogen and its activity for catalytic hydrogenation, T., 1280.

Mayeda, S. See Yasuhiko Asahina.

Mayer, André, H. Magne, and L. Plantefol, the toxicity of the chloromethyl carbonates and chloroformates, A., i, 147.

Mayer, André, L. Plantefol, and Fred. Vlès, poisoning by nitrohalogenated methanes, A., i, 147.

Mayer, (Mlle.) Anka. See Maximilian Samec.

Mayer, Fritz, and August Bansa, action of o-chlorobenzaldehyde on feebly basic amines, particularly those of the naphthalene series; constitution of derivatives of naphthalene, A., i, 175.

Mayer, Fritz, and Karl Freitag, constitution of fluoranthene; syntheses of isodiphenic acid and fluorenone-l-carboxylic acid, A., i, 248.

Mayer, Fritz, and Adolf Sieglitz [with Willy Ludwig], isomerisation of I-phenylindene during pyrogenic distillation (a new hydrocarbon), A., i, 554.

Mayer, Hans Ferd., relation of molecules to slow free electrons, A., ii, 234.

Mayer, Martin, and Heinz Leiss, experiments with a new trypanocidal agent ("Bayer 205") on trypanosomes pathogenic to man and to animals, A., i, 908.

Mazé, Pierre, the assimilation of carbon dioxide by green plants, A., i, 151, 209.

Mazuir, A., nickel plating of aluminium, A., ii, 50.

Mazzetti, C., double ternary systems with miscibility gaps in the liquid and solid states. I. and II., A., ii, 29.

Mazzetti, C. See also Nicola Parravano. Means, J. H. See L. W. Smith.

Meer, C. N. van der. See J. Temminck Groll.

Meggers, W. F. See C. C. Kiess and F. L. Mohler.

Meier, Klothilde. See Hermann Straub. Meincke, Peter. See Gustav Embden.

Meisenheimer, Jakob, connexion between the colour of chemical compounds and the structure of the molecule, A., ii, 364.

Meisenheimer, Jakob, Eugen von Budkewicz, and Georg Kananow, di- and tri-phenylmethane series. I. p-Alkylaminobenzophenones, A., i, 356. Meisenheimer, Jakob, Eugen von Budkewicz, Georg Kananow, and Julius Neresheimer, di- and tri-phenylmethane series. II. Unsymmetrical leuco-bases of the malachite-green and crystal-violet series, A., i, 358.

Meisenheimer, Jakob, and Johannes Casper, constitution of Grignard's magnesium compounds, A., i, 654.

Meisenheimer, Jakob, and Julius Neresheimer, di- and tri-phenylmethane series. III. Attempts to prepare optically active leuco-bases of triphenylmethane colouring matters, A., i, 359.

Meisenheimer, Jakob, and Bruno Wieger, l-vinylbenziminazole, A., i, 739.

Meissner, Karl Leo. See William Minot Guertler.

Meissner, K. W., Bergmann series of cæsium, A., ii, 565.

Meissner, Walther, thermal and electrical conductivity of lithium between 20° and 373° absolute, A., ii, 151.

thermal and electric conductivities of metals, A., ii, 480.

Meitner, Lise, different modes of radioactive disintegration and the possibility of [indicating] their significance from the nuclear structure, A., ii, 293.

Meitner, Lise. See also Otto Hahn. Melander, K. H. A., lignin substance,

A., i, 849. Melber, Walter Wolfgang. See Karl Fleischer.

Meldolesi, Gino. See Sigmund Fränkel. Meldrum, Andrew Norman. See Rupchand Lilaram Alimchandani.

Mellanby, John, and C. J. Thomas, carbon dioxide carrying power of the constituents of plasma; the alkali reserve of blood, A., i, 142.

Mellenheim, Julius Mell von. See Albert Klauber.

Menaul, Paul, formation of hydrocyanic acid in plants, A., i, 484.

modification of the van Slyke method of protein analysis, A., ii, 472.

Menaul, Paul. See also Carr T. Dowell.
Menzies, Alan Wilfrid Cranbrook, a
method of measuring low vapour
pressures, with its application to the
case of 2:4:6-trinitrotoluene, A., ii,
17.

explanation of an apparent anomaly outstanding in the results of measurement of dissociation pressures, A., ii, 304.

molecular state of water vapour, A., ii, 381.

a differential thermometer, A., ii, 622.

Menzies, Alan Wilfrid Cranbrook, and Sidney L. Wright, applications of a differential thermometer in ebullioscopy, A., ii, 622.

Merck, E., preparation of n-acylalkylhomopiperonylamines, A., i, 341. formyl derivatives of secondary bases,

A., i, 591.

Merica, P. D., physical properties of nickel, A., ii, 117.

Merkel, Paula. See Otto Fischer.

Merkel, P. P. See Paul H. M.-P. Brinton.

Merton, Thomas Ralph, effect of concentration on the spectra of luminous gases, A., ii, 2.

spectrophotometry in the visible and ultra-violet spectrum, A., ii, 287. spectra of lead isotopes, A., ii, 611.

Mertz, Albrecht, micro-estimation of dextrose by Bang's method, A., ii, 67. Merwin, Herbert Eugene. See Eugen

Posnjak, and Henry Stephens Washington.

Messmer, Ernst. See Kurt Hess. Mestrezat, W., Poirrier's blue C4B as an indicator, A., ii, 515.

Mestrezat, W., and (Mlle.) Marthe Paul Janet, presence in urine of nitrogen not determined by the Kjeldahl method, A., i, 477.

the comparative estimation of the total nitrogen in urine by the methods of Dumas and Kjeldahl, A., ii, 58.

nitrogen titratable by the Kjeldahl method, A., ii, 411.

Mestrezat, W., and (Mlle.) S. Ledebt, the compensating rôle of chlorides in their relationships with the chemical composition of humours, A., i, 634.

Metcalfe, E. Parr, and B. Venkatesachar, absorption of light by electrically luminescent mercury vapour, A., ii,

Meunier, Jean, principles of analysis by means of reducing flames; detection of traces of manganese in the presence of iron or other substances, A., ii,

Meunier, Louis, action of sodium carbonate on chrome alum solutions, A., ii, 405.

Meunier, Louis, and P. Caste, action of sodium carbonate on solutions of chrome alum, A., ii, 512.

Meurice, R., volumetric estimation of iron in the presence of a large quantity of hydrochloric acid, A., ii, 218.

volumetric estimation of arsenious compounds by means of potassium dichromate, A., ii, 347.

Meyer, Ernst. See Bruno Emmert. Meyer, Friedrich, and H. G. Kessler. preparation of chlorine heptoxide, A.,

ii, 326.

Meyer, Friedrich, and W. Sandow. preparation of fluorine from molten potassium hydrogen fluoride, A., ii, **3**98.

Meyer, Friedrich, and R. Zappner. preparation of boron by the dissociation of boron bromide, A., ii, 328.

the preparation of considerable quantities of pure boron nitride, A., ii,

Meyer, G., critical temperature of mercury, A., ii, 238.

Meyer, Gustave Morris. See Phæbus A. Levene.

Meyer, Hans, and Alice Hofmann-Meyer, pyro-condensations in the pyridine series, A., i, 739.

Meyer, Heinrich F. W. See Wilhelm Schneider.

Meyer, Jules. See Leopold Ruzicka.

Meyer, Julius, the alkali cyanides. A., i, 501.

Meyer, Julius, and Hanns Moldenhauer, the preparation of selenic acid, A., ii, 503.

Meyer, Julius, and Robert Nerlich,

tervalent manganese, A., ii, 509. Meyer, Julius. See also Walter Herz. Meyer, Kurt Heinrich [with Heinrich Hopff, and Walter Felix], substitution

processes, A., i, 855.

Meyer, Kurt Heinrich, and W. E. Elbers, action of nitric acid on phenols and phenol ethers, A., i, 240.

Meyer, Kurt Heinrich, and Gottlieb-Billroth, keto-enolic desmotropy. XIII. Triphenylvinyl alcohol and 9-benzoylfluorene, A., i, 422.

Meyer, Kurt Heinrich, and Heinrich

Hopff, keto-enolic desmotropy. XIV. Preparation of the enolic forms of ethyl acetoacetate and acetylacetone, A., i, 391.

the constitution of hydrocyanic acid, A., i, 776.

dimethylvinylamine, A., i, 851.

Meyer, Kurt Heinrich, and Ludwig Orthner, synthesis of formamide from carbon monoxide and ammonia, A., i,

Meyer, Kurt Heinrich, and Walter Reppe, steps in the reduction of aryl derivatives of nitric acid, A. i, 235.

Meyer, Kurt Heinrich, and the coupling of Tochtermann, benzenoid hydrocarbons with diazocompounds, A., i, 895.

Richard, Martin Heinrich Klaproth, A., ii, 195.

Meyer, Richard, Wilhelm Meyer, and Kurt Taeger, attempted synthesis of a hydrocarbon, C₁₄H₁₀, A., i, 20.

Meyer, Stefan, rate of decay actinium and the transformation relationships of the actinium series, A., ii, 8.

the question of the existence of isotopes with the same atomic weight, A., ii, 78.

radioactive constants according to the position in 1920, A., ii, 235.

Meyer, Wilhelm. See Richard Meyer. Meyerhof, Otto, the transformation of energy in the muscle. I. The relation of lactic acid to the heat production and to the performance of work in the muscle in anærobiosis, A., i, 76.

the transformation of energy in the muscle. II. The fate of lactic acid during the recovery period of the muscle, A., i, 76.

Meysenbug, L. von, and G. F. McCann, the diffusible calcium of the blood II. Human rickets and serum.

experimental dog tetany, A., i, 753.

Meysenbug, L. von, A. M. Pappenheimer, T. F. Zucker, and M. F. Murray, the diffusible calcium of the blood serum. I. Estimation, A., i, **75**3.

Michael, Arthur, the structures and reactions of hydroxylamine and its derivatives, A., ii, 328.

Wilhelm. Michael, See RichardLorenz.

Michaelis, Leonor, the importance of the gastric hydrochloric acid, A., i, 74.

the theory of invertase action, A., i,

Michaelis, Leonor, and A. Gyemant, the estimation of the hydrogen-ion con-centration by means of indicators, A., ii, 56.

Michaelis, Leonor, and C. Timénez-Diaz, ionic synergism. I. Experiments with congo-rubin, A., ii, 682.

Michalik, Rudolf. See Amandus Hahn. Michel, Eduard. See Fritz Ephraim.

Middleton, Edmund Burrus. See Harry B. Weiser, and Frank C. Whitmore.

Middleton, Howard E. See Charles J. Moore.

See Max Bergmann. Miekeley, Artur. Mielenz, W., and H. von Wartenberg, the heats of formation of glucinum oxide and chloride, A., ii, 487.

Mignonac, Georges, $_{
m the}$ catalytic hydrogenation of hydrobenzamide; method of preparation of benzylamine, A., i, 129.

new general method of preparation of amines from aldehydes or ketones, A., i, 165.

Mignonac, Georges. See also Charles Moureu.

Miholić, Stanko S., the reaction of sodium salts with uranyl acetate alone and in the presence of salts of magnesium, zinc, cadmium, glucinum, A., i, 219.

Mikeska, Louis A., the preparation of 4-methylquinoline and related bases, A., i, 54.

Mikeska, Louis A., and Elliot Quincy Adams, tetramethylquinolines, A., i.

Mikeska, Louis A., Herbert L. Haller, and Elliot Quincy Adams, synthesis of photosensitising dyes. II. Dicyanine "A," A., i, 54.

Mikeska, Louis A. See also Treat Baldwin Johnson, and Phæbus A.

Levene.

Milbauer, Jaroslav, and J. Pazourek, oxidation of sulphites in concentrated solutions, A., ii, 635.

Milde, E. See Fritz Arndt.
Miller, C. W., and J. E. Sweet, a possible source of error in testing for Bence-Jones protein, A., ii, 720.

Miller, E. B., the use of silica gel as an adsorbent for vapours, A., ii,

Miller, E. J., and Charles S. Robinson, the acid amide fraction of the nitrogen of peat, A., ii, 718.

Miller, Emerson Romeo, dihydroxyphenylalanine, a constituent of the velvet bean, A., i, 84.

Miller, Elizabeth W., the effect of

cooking on the water-soluble vitamins in carrots and navy beans, A., i,

Miller, George E. See John W. E. Glattfeld.

Miller, Harry G., distribution of nitrogen in lucerne seed, A., i, 486.
the relation of sulphates to plant
growth and composition, A., i, 911.
illigan, C. H. See John W. E.

Milligan, C. H. Glattfeld.

Millikan, Robert Andrews, extension of the ultra-violet spectrum, A., ii, 3.

Millikan, Robert Andrews, I. S. Bowen, and R. A. Sawyer, vacuum spark spectra in the extreme ultra-violet of carbon, iron, and nickel, A., ii, 609.

Millosevich, Federico, paternoite, a new mineral of the saliferous stratum of Monte Sambuco in the Calascibetta region (Sicily), A., ii, 54.

minerals of Lazio; melilite of inclusions in Peperino, A., ii, 343.

Mills, Edmund James, obituary notice of, T., 2130.

Mills, William Hobson, John Edmund Guy Harris, and Herbert Lambourne, the Doebner-Miller quinaldine synthesis, T., 1294.

Mills, William Hobson, and Charles Reynolds Nodder, the optically active forms of the ketodilactone of benzophenone-2:4:2':4'-tetracarboxylic acid, T., 2094.

Minot, Annie S. See Clarence K. Reiman.

Minovici, Stefan, the resolution of aminophenylacetic acid into its optically active compounds, A., i, 244.

Minovioi, Stefan, and Al. Ionesou, detection and estimation of potassium as picrate, A., ii, 520.

Minovici, Stefan, and Constantin Kollo, volumetric estimation of potassium, A., ii, 520.

Minovici, Stefan, and V. Thüringer, a lactimonic derivative of aminophenylacetic acid, A., i, 272.

Miranda, D. de, and A. E. Roest van Limburg, iodometric estimations by Stortenbeker's method, A., ii, 516.

Mirande, Marcel, seeds of the Papilionaceæ family with hydrosulphide autofermentation, A., i, 486.

autofermentation, A., i, 486. extraction and nature of the hydrosulphide compound in the seeds of certain Papilionaceæ, A., i, 759.

Mirasol, Jose Jison, aluminium as a factor in soil acidity, A., i, 88.

Misson, G., colorimetric estimation of sulphur in cast-iron and steel, A., ii, 556.

556.

Mitchell, Alec Duncan, studies on hypophosphorous acid. III. Its reaction with mercuric chloride, T., 1266.

Mitchell, Philip H., and J. Walter Wilson, the selective absorption of potassium by animal cells. I. Conditions controlling absorption and retention of potassium, A., i, 830.

Miura, Masataro. See Sylvester Solomon Zilva.

Miyamoto, Nobu. See Shuzo Kozawa. Moeller, W., tanning (hardening) of gelatin by formaldehyde, A., i, 693.

adsorption of formaldehyde by animal charcoal, A., ii, 304.

Moerk, Frank, methyl-orange as an indicator in the presence of indigo carmine, A., ii, 705.

Moers, Kurt, investigations on the salt character of lithium hydride, A., ii, 200

Moesveld, A. L. Th. See Ernst Cohen. Mohler, F. L., and Paul D. Foote, ionisation and resonance potentials of some non-metallic elements, A., ii, 368.

soft characteristic X-rays from arcs in gases and vapours, A., ii, 570.

Mohler, F. L., Paul D. Foote, and W. F. Meggers, resonance potentials and low-voltage arcs for metals of the second group of the periodic table, A., ii, 8.

Moir, James, the calculation of the colour of "cyclic" coloured sub-

stances, T., 1654.

colour and chemical constitution. X. A general numerical solution of the colour-constitution problem, A., ii, 6.

estimation of nitrous fumes in air, with special reference to fuse-

igniters, A., ii, 345.

colour and chemical constitution. XI. A systematic study of the brominated phenolphthaleins regarding the relation between position and colour, A., ii, 365.

colour and chemical constitution. XII. Calculation of colour from the tautomeric theory, A., ii, 475.

permanganate absorption spectrum; claim for priority; formula for calculating the uranium spectrum, A., ii, 670.

Moissonnier, (Mile.) S. See P. Carnot. Molander, Gösta, d-Iupanine, C₁₅H₂₄ON₂, A., i, 886.

Moldanke, Karl. See Julius von Braun. Moldenhauer, Hanns. See Julius Mever.

Moles, Enrique, and T. Batuecas, numerical revision of the results connected with the density of methyl fluoride; atomic weight of fluorine, A., i, 389.

Moles, Enrique, and F. Gonzalez, new revision of the density of oxygen gas, A., ii, 546.

Moles, Enrique, and R. Izaguirre, coppercyanogen compounds, A., i, 322.

Molisch, Hans, microchemistry of plants. XIV. Blueing of plant ash by zinc chloro-iodide. XV. Separation of fat drops on the fruit of an apple (Matus coriarius), A., i, 213.

Molliard, Marin, influence of sodium chloride on the development of Sterigmatocystis nigra (Aspergillus niger), A., i, 481.

Moncada, C. See Guido Bargellini.
Monier-Williams, Gordon Wickham, the hydrolysis of cotton cellulose, T., 803.

measurement of hydrogen-ion concentration, A., ii, 650.

Monroe, Kenneth Potter. See James Kendall.

Montagne, (Mlle.). See Ernest Fourneau, and José Puyal.

Montagne, Pieter, the relative mobility of atoms and groups in organic compounds, A., i, 89.

the influence of carbon disulphide in the Friedel-Crafts' synthesis, A., i, 348

Moog, R. See Alexandre Desgrez.

Moore, Benjamin, photo-synthetic processes in the air, upon the land, and in the sea in relation to the origin and continuance of life on the earth, T., 1555.

Moore, Benjamin, Edward Whitley, and T. Arthur Webster, photo-synthesis in marine algæ. I. Fixation of carbon and nitrogen from inorganic sources in sea water. II. Increase of alkalinity of sea water as a measure of photosynthesis, A., i, 211.

Moore, Charles J., William H. Fry, and Howard E. Middleton, methods for estimating the amount of colloidal material in soils, A., ii, 608.

Moore, H. C., and R. D. Caldwell, estimation of potassium by the Lindo-

Gladding method, A., ii, 132.

Moore, Neil Preston, comparative study of fractionating still-heads, A., ii, 433.

Moore, Neil Preston. See also Stewart Woodford Young.

Moore, Tom Sidney, reduction of aromatic azo-compounds and nitro-compounds, A., i, 742.

Moore, Tom Sidney, and (Miss) Ida Doubleday, some new tricyclic bases,

T., 1170.

Moore, Tom Sidney, (Miss) Muriel Tregarthen Marrack, and (Miss) Annie Kathleen Proud, the application of Hofmann's reaction to substituted phthalimides, T., 1786.

Moore, William C., zinc electrode, A., ii, 236.

Moormann, T. A. See Junius David Edwards.

Morel, Henri, present state of the nucleic acid question, A., i, 641.

Morel, Jules. See Paul Wenger.

Morgan, Gilbert Thomas, and Henry Burgess, non-aromatic diazonium salts. VI. 3:5-Dimethylisooxazole-4-diazonium salts and their azoderivatives, T., 697.

non-aromatic diazonium salts. VII. The diazo-reaction in the isooxazole

series, T., 1546.

Morgan, Gilbert Thomas, and William Arthur Percival Challenor [with Frank Raymond Jones] o-chlorodinitrotoluenes. III. Bases derived from 2chloro-4:5-dinitrotoluene, T., 1537.

Morgan, Gilbert Thomas, and Harry Dugald Keith Drew, researches on residual affinity and co-ordination. III. Reactions of selenium and tellurium acetylacetones, T., 610.

researches on residual affinity and coordination. V. Gallium acetylacetone and its analogues, T., 1058.

Morgan, Gilbert Thomas, and Thomas Glover, o-chlorodinitrotoluenes. IV. 2-Chloro-3:4-dinitrotoluene, T., 1700.

Morgan, Gilbert Thomas, and William Robinson Grist, arylsulphonylnaphthylenediamines and their sulphonic acids, T., 602.

Morgan, Gilbert Thomas, and Wilfred John Hickinbottom, studies in the n-butyl series. I. Aryl n-propyl ketones, T., 1879.

Morgan, Gilbert Thomas, and Leslie Amiel Jones, o-chlorodinitrotoluenes. II., T., 187.

Morgan, Gilbert Thomas, and J. D.
Main Smith, researches on residual
affinity and co-ordination. IV.
The constitution of simple and
complex cobaltic quinoneoxime
lakes, T., 704.

researches on residual affinity and coordination. VI. Selenodithionic acid and its metallic salts, T., 1066.

Morgan, Gilbert Thomas, and Dudley Cloete Vining, dihydroxynaphthaldehydes, T., 177.

dinaphtha-1:7:1':7'-diquinone, T.,

Morgan, Gilbert Thomas, and (Miss) Dorothy Webster, diazo-derivatives of 4'-amino-1-phenyl-5-methylbenzothiazole (dehydrothio-p-toluidine), T., 1070.

Morgan, John David, and Richard Vernon Wheeler, phenomena of the ignition of gaseous mixtures by induction coil sparks, T., 239.

Morgan, Jerome J., new method for the estimation of potassium in silicates,

A., ii, 349.

Morgan, Jerome J. See also Daniel Jackson.

Morgenroth, Julius, anæsthetic action of anæsthesin [ethyl p-aminobenzoate] and some of its derivatives, A., i, 384.

Morgulis, Sergius, the catalase reaction,

A., i, 751.

Morgulis, Sergius, and V. E. Levine, decomposition of hydrogen peroxide by organic compounds and its bearing on the catalase reaction, A., i, 17.

Morris, R. Leitch, volumetric estimation of arsenic acid and arsenates, A., ii, 519.

Morse, W., is glycogen the source of the acids developed in autolysis? A., i,

Moser, Eduard, simple electric heater for the evaporation of liquids, A., ii, 15.

Moser, Ludwig, and Th. Kittl, use of hypophosphorous acid in gravimetric analysis; estimation of silver and its separation from lead and other metals, A., ii, 521.

Moser, Ludwig, and Anna Schattner, estimation of metal sulphides by heating in hydrogen sulphide. I., A., ii, 558.

Mosimann, Paul. See Fritz Ephraim. Motigase, Seizô. See Yasuhiko Asahina.

Motz, Robert. See Emil Knoevenagel. Mouret, (Mlle.), and J. Barlot, quantitative separation of tin and antimony in the presence of phosphoric acid, A., ii, 597.

Moureu, Charles, and Augustin Boutaric, some physico-chemical constants of

acrylic acid, A., i, 390.

Moureu, Charles, Augustin Boutaric, and Charles Dufraisse, some physicochemical constants of acraidehyde, A., i, 395.

Moureu, Charles, and Ralph L. Brown, some propionitriles with mixed func-

tion, A., i, 101.
Moureu, Charles, Charles Dufraisse, Adolphe Lepape, Paul Robin, Jean Pougnet. Augustin Boutaric, and Etienne Boismenu, acraldehyde, A., i,

Moureu, Charles, and Adolphe Lepape, the rare gases of the natural gases of

Alsace-Lorraine, A., ii, 44. Moureu, Charles, and Georges Mignonac, the ketimines, A., i, 108.

the dehydrogenation of alcohols by catalytic oxidation, A., i, 218.

Moureu, Charles, and Marcel Murat, action of thiodiglycol [\$\beta'\dilydroxydiethyl sulphide] on silver salts, A., i, 90.

Moureu, Charles, Marcel Murat, and Louis Tampier, some derivatives of crotonaldehyde, A., i, 160.

acrylic acid and acrylic esters; halogenated propionic acids and esters, A., i, 495, 536.

Moyle, Dorothy Mary. See Dorothy ${L}ilian$ Foster.

Mroziński, W. See Antoine Korczyński. Mudge, William A. See Harold A. Fales.

Mügge, O., formation and stability of modifications of polymorphous substances below their transition temperature, A., ii, 576.

Müller, Alex., X-ray bulb with liquid mercury anticathode and wave-length measurements of the L-spectrum of mercury, A., ii, 569.

Müller, Arno, the condensation of formaldehyde with acetone, A., i, 542.

synthesis of alkylarylmethanes from ketones and phenols, A., i, 656. a new case of anisotropy in melting

point, A., i, 674.

benzylidenecarvone, A., i, 675. optical investigations in the chemistry

of the terpenes. I., A., i, 678. Erich, **M**üller, solubility of cupric hydroxide in concentrated sodium hydroxide solution, A., ii, 113.

Müller, Erich [with (Frl.) Ilse Ernst],

sodium cuprite, A., ii, 552.

Müller, Erich, and Antonio Rius y Miró, the electrolytic oxidation of methyl and ethyl alcohols in alkaline solution; the electrolytic formation of methane, A., i, 218.

Müller, Ernst, and Leonhard Herrdegen, action of anhydrous hydrazine on nitriles, A., i, 741.

Müller, Franz. See Fritz Ephraim.

Müller, J. See F. Lenze.

Müller, Johannes. See Wilhelm Steinkopf.

Müller, John H., atomic weight of germanium, A., ii, 456.
Müller, R. See Otto Fischer.

Müller, Rudolf, conditions for the precipitation of the Wassermann reaction antigen (heart extract), A., i, 830.

Müller, Wilhelm. See Ernst Berl. Müller, Wolf Johannes. See Johann Georg Koenigsberger.

Münch, Siegmar, fusion of carbon, A., ii, 586.

ünz, E., physiology of methane bacteria, A., i, 909. E., Münz.

Mugdan, Susanne. See Otto Ruff.

Muguet, A., and J. Seroin, the age of the autunites of Portugal, A., ii, 55.

nitrite, A., ii, 594. of sodium Muhlert, F.,

estimation of alkali hydroxide and carbonate in presence of cyanide and ferrocyanide, A., ii, 595.

Muhry, Grete. See Anton Skrabal.

Mukai, Genko, removal of protein from body fluids for the purpose of simultaneous estimation of many constituents, A., ii, 593.

Mullaly, John Mylne. See Dalziel

Llewellyn Hammick.

Muller, Joseph Auguste, and (Mlle.) Eglantine Peytral, the sudden pyrogenic decomposition of formic acid and the preparation \mathbf{of} carbonmonoxide, A., i, 156.

Muller, P., estimation of citric-soluble phosphate in superphosphate, A., ii, 275.

Muller, P. See also Hijmans van den Bergh.

Multhaupt, R. See M. Kochmann.

Mumm, Otto, and Wilhelm Beth, partial hydrogenation of pyridinecarboxylic esters, A., i, 686.

Mumm, Otto, and Otto Bohme, syntheses of certain carboxylic and ketocarboxylic acids of pyridine, Λ ., i, 439.

Munroe, Charles E., and Spencer P. Howell, products of detonation of trinitrotoluene, A., i, 18.

Murakami, Takejirô, equilibrium diagram of the system, silicon-iron, A., ii. 589.

Murakami, Takejirô. See also Kôtarô Honda.

Murat, Marcel. See Charles Moureu. Murayama, Yoshiatsu, the essential oil of Mosla japonica, Maxim, A., i, 875.

occurrence of moslene in essential oils

containing p-cymene, A., i, 876. Murayama, Yoshiharu, and Shinjirô Aoyama, constituents of the Japanese common earth-worm, A., i, 477.

Yoshiharu, and Murayama, Itagaki, constituents of the root of gishi-gishi, A., i, 760.

Murray, C. D. See A. Baird Hastings. Murray, H. A., jun. See A. Baird Hastings.

Murray, M. F. See L. von Meysenbug. Murschhauser, Hans, mutarotation of dextrose in solutions of secondary sodium phosphate, A., i, 10.

optical rotation of dextrose under the influence of hydrochloric acid. II. The change of rotatory power and reducing capacity of dextrose solutions in hydrochloric acid at 100°, A., i, 765.

Murschhauser, Hans, the quantitative estimation of dextrose and lævulose in a solution, A., ii, 715.

Mutscheller, Arthur, colloidal adsorption, A., ii, 26.

Myers, Chester Newton, metal salts of thioglycollic [α -thiolacetic] acid, A., i, 843.

Myers, Victor Caryl, and Hilda M. Croll, estimation of carbohydrates in vegetable foods, A., ii, 465.

Myers, Victor Caryl, and James J. Short, the potassium content of human blood, A., i, 525.

the potassium content of normal and some pathological human bloods, A., i, §28.

Mylius, Franz, and Werner Mylius, the purification and testing of aluminium, A., ii, 204.

Mylius, Werner. See Franz Mylius.

N.

See Volkmar Kohlschütter. Nägeli, A. Nägeli, C. See P. Karrer.

Nagai, Shōichirō, geometrical isomerism of isosafrole, A., i, 857.

Nagayama, T., activity of the kidneys and acidic basic equilibrium, A., i, 205.

elimination of urea and of phosphates by the kidneys, A., i, 205.

the decomposition of pyruvic acid by various fungi, A., i, 836.

Nagel, David Henry, obituary notice of, T., 551.

Naik, Kuverji Gosai, the formation and properties of dithio-ketones $(R_2C:S:S)$ and dithio-ethers $(R_2S:S)$. I. and II., T., 379, 1231.

interaction of sulphur monochloride and organic acid amides, T., 1166.

Nakao, Manzô, a Chinese drug "shê-chuang-tzu," A., i, 87.

Nakazawa, Tadasu. See Motooki Matsui. Nakazono, Tamaki, application of amalgams in volumetric analysis. estimation of molybdenum, titanium, and iron, A., ii, 596.

application of amalgams in volumetric analyses. II. Estimation of vanadium and uranium, A., ii, 714.

Nanji, Dinshaw Rattonji. See Arthur Robert Ling.

Nannei, Bianca, action of light on the thermal conductivity of selenium, A.,

Narbutt, J., approximate calculation of the latent heat of fusion of the liquefied inactive gases, A., ii, 163.

Nathansohn, Alexander. See. Herbert Freundlich.

Nedzati, F. See A. Schönberg.

Negelein, Erwin. See Otto Warburg.

Neker, P. See Karl Elbs.

Neidig, Ray E., and Robert S. Snyder. the application of the van Slyke method to hydrolysed protein extracts of silage crops, A., i, 488.

Neish, Arthur C., and J. W. Burns, the precipitation of some of the rare earths by creams of insoluble oxides and carbonates, based on the principle of hydrolysis, A., ii, 560.

Nelken, Annemarie. See Ernst Weitz. Nelson, O. A. See George Augustus Hulett.

Nelson, Victor E., Ellis I. Fulmer, and Ruth Cessna, nutritional requirements of yeast. III. Synthesis of watersoluble B, A., i, 386.

Nelson, Victor E. See also Ellis I. Fulmer.

Němec, Antonín, the presence of uricase in the plant organism, A., i, 213.

Němec, Antonín, and Václav Káš, the influence of selenium on the development of some moulds belonging to the Penicillium genus, A., i, 294.

Neresheimer, Julius. See Jakob Meisenheimer.

Nerlich, Robert. See Julius Meyer.

Nesti, A. See Gualtiero Poma.

Neu, Wilhelm. See Richard Lorenz. Neuberg, Carl, and Julius Hirsch, carboligase; a ferment linking carbon chains, A., i, 480.

Neuberg, Carl, F. F. Nord, and E. Wolff, acetaldehyde as an intermediate product in the fermentation of sugar by Bacillus lactis aerogenes, A., i, 148.

Neuberg, Carl, and Marta Sandberg, chemically defined catalysts in alco-

holic fermentation, A., i, 82.
Neuberg, Carl, and Werner Ursum, the third form of fermentation of sugar as a general consequence of the dismutation influence of inorganic and organic "alkalisers," A., i, 81.

Neuberg, Carl. See also E. Färber.

Neuburger, M. C., origin of uranium- Z_2

(uranium Z), A., ii, 479. nomenclature of the radioactive fami-

lies, A., ii, 676. Bernhard

with WalterNeumann. Gellendien], decomposition of amcarbonate monium with calcium sulphate, A., ii, 587.

eumann, Bernhard [with Gertrud Kotyga], decomposition of calcium Neumann, sulphate by ammonium hydroxide, A., ii, 587.

Neumann, Bernhard, and Ernst Karwat, the preparation of sodium hydroxide from sodium sulphate, A., ii, 333.

Neuschlosz, S. M., antagonistic action between ions of similar charge, A., i, 148.

Neuschloss, S. M. See also Heinrich Bechhold.

Newbery, Edgar, chlorine overvoltages. Т., 477.

Newman, F. H., absorption of gases in the electric discharge tube, A., ii, 295. Ney, O. See Alexander Classen.

Nicloux, Maurice, estimation of carbon monoxide in the blood, and determination of the maximum absorption of carbon monoxide by the blood, A., i, 204.

micro-estimation of carbon monoxide in blood, A., ii, 594.

Nicloux, Maurice, and Georges Welter, a micro-method for the estimation of iron in organic combination, A., ii, 523.

Nicolardot, Paul, and Ch. Coffignier, the solubility of some new resins, A., i, 876.

the solubility of some resins from Cochin-China, A., i, 876.

Nicolas, G., mechanism of the fertilising action of sulphur, A., i, 214.

Nicolet, Ben H., C₁₈ fatty acids. I. The non-identity of eleostearic acid tetrabromide from tung oil with ordinary linolic acid tetrabromide,

A., i, 390. Nicolet, Ben H., and Joseph J. Pelc, the benzilic acid rearrangement; the non-addition of hydrogen peroxide to diphenylketen, A., i, 418.

Nierenstein, Maximilian, the constitu-tion of catechin, III. Synthesis of acacatechin, T., 164.

Nierenstein, Maximilian, William Spiers, and Arthur Geake, gallotannin. XII., T., 275.
Niesemann, H. See Th. Sabalitschka.

Nightingale, Donald Archer. British Cellulose and Chemical Mfg. Co., Ltd.

Nijk, D. R., crystalline acetylphenylurethane, A., i, 23.

Nishizawa, Yushichi, preparation of isoprene from light camphor oil, A., i, 217.

perilla oil and chamæcyparis (Japanese cedar) oil, A., i, 258.

coloration of zinc sulphide by the action of light, A., ii, 263.

Nivière, Jean, a catalytic method of hydrogenation, A., ii, 391.

Njegovan, Vladimir, detection of antimony in presence of tin, A., ii, 562.

Noack, Kurt, metabolism of thermophilic fungi, A., i, 294.

catalytic processes of physiological importance effected by light, A., i, 910.

Nobécourt, Pierre, action of some alkaloids on Botrytis cinerea, Pers., A., i, 485.

Nobel, Edmund. See Otto von Fürth.

Nocentini, Giulio. See Umberto Sborgi. Noddack, Walter, new application of Einstein's photochemical equivalent law, A., ii, 568.

Nodder, Charles Reynolds, a convenient form of the periodic classification of

the elements, A., ii, 38.

Nodder, Charles Reynolds. See also William Hobson Mills.

Nolan, P. J. See John Alexander McClelland.

Nolf, P., preparation of thrombozyme in a state of purity, A., i, 634.

Nolte, O., effect of salt solutions on the soil, A., i, 914.

estimation of nitrogen in nitrates by Arnd's method, A., ii, 518.

Nooyen, A. M., urson and its distribution in the plant world, A., i, 117.

Nord, F. F. See E. Färber, Carl Neuberg, and Aladar Skita.

Nordefeldt, E., the temperaturecoefficient of the decomposition of hydrogen peroxide by fat catalase, A., ii, 36.

Norris, James Flack, and Henry B. Couch, the condensation of benzoyl chloride with ethylene in the presence of aluminium chloride, A., i, 32.

Norris, Woodford Stanley Gowan Plucknette, and Jocelyn Field Thorpe, the formation and stability of spiro-compounds. V. Derivatives of cyclopentanespirocyclohexane and of cyclopentanespirocyclohexane, T., 1199.

Northrop, John H., the significance of the hydrogen-ion concentration for the digestion of proteins by pepsin, A., i, 137.

comparative hydrolysis of gelatin by pepsin, trypsin, acid, and alkali, A., i, 823.

the rôle of the activity coefficient of the hydrogen-ion in the hydrolysis of gelatin, A., ii, 541.

Nowack, Leo, chemical and galvanic activity boundaries of the coppernickel, palladium-copper, and pal-

nickel, palladium-copper, and palladium-silver mixed crystals, A., ii, 208

Noyes, Arthur Amos, and Leighton B. Smith, the dissociation pressures of iron nitrides, A., ii, 304. Noyes, Arthur Amos, and Leon R. Westbrook, determination of the vapour pressure of salt hydrate by a distribution-conductivity method, A., ii, 377.

Noyes, Helen Miller. See Herbert Eckweiler.

Noyes, William Albert, the reaction between chlorine and ammonia. III. Probable formation of trichloro-ammonium chloride, A., ii, 42.

Noyes, William Albert, and A. B. Haw, the reaction between chlorine and ammonia. II., A., ii, 42.

Noyes, William Albert. See also C. W. Colver, George E. Gibson, Ralph W. Hufferd, and C. S. Marvel.

Noyes, William Albert, jun. See Charles Marie.

Nuti, Mario. See Luigi Rolla. Nye, Lillian L. See Martha R. Jones.

0.

Oakes, Earle T. See Hal Truman Beans.

Obrist, Josef. See Josef Holluta.

Ochi, Shuichiro, preparation of chloroform from ethyl alcohol and the mechanism of its reaction, A., i, 298.

O'Connor, Edmund Arthur, the binary system, amiline-acetic acid, T., 400.

Oda, Keiji, hydrogenation of acetylene for the preparation of fuel oils, A., i, 841.

Oddo, Bernardo, indole group. VII. Products of the auto-oxidation of indoles, A., i, 127.

new syntheses in the pyrrole group. XIII. Pyrrolic ketonic acids and dipyrryl ketone, A., i, 129.

Oddo, Giuseppe, new periodic classification of the elements, A., ii, 102.

alteration of the basis of the atomic weights and decennial revision of the atomic weight table, A., ii, 691.

Odén, Sven, the humus acids, A., i, 393. the structure of precipitates, A., ii, 25.

Odén, Sven, and Hugo Andersson, stoichiometry of adsorption. I. Adsorption of kations of the alkalis and alkaline earths, A., ii, 438.

alkaline earths, A., ii, 438.

Odén, Sven, and E. W. Langelius, stoichiometry of adsorption. II.

Adsorption of potassium and barium salts of various anions, A., ii, 625.

Odling, William, obituary notice of, T., 553.

Oelbermann, G. See Emil Knoevenagel.

Östling, Gustav Jim, condensation of methylene dicyanide with ketones and aldehydes, A., i, 321.

tolunaphthol [8-naphthyl p-toluate], A., i, 344.

spectro-chemistry of cyclobutane derivatives, A., i, 346.

preparation of glycols corresponding with pinic, norpinic, and d-camphoric acids and their derivatives, A., i,

formation of bicyclic systems with cyclobutane rings, A., i, 665.

1:2:2-trimethyl-1:3-dimethanolcyclopentane, A., i, 666.

Ogg, A., the crystalline structure of antimony and bismuth, A., ii, 513. Ohashi, Ryōichi, augite from Nishiga-

take, Japan, A., ii, 407. Ohlendorf, Heinrich. See Hermann O. L. Fischer.

Ohse, Ernst. See Erwin Ott.

Okumura, Otosaburo, food plants of Formosa. III., A., i, 88.

Oldham, John Walter Hyde. See James Colquhoun Irvine.

Oliveri-Mandalà, E., compounds of antipyrine with mercury, A., i, 378. azides of thiocarbamic acids, A., i, 900. double pyrophosphate of iron and sodium, A., ii, 338.

decomposition of nitrous acid, A., ii, 346.

reaction of nitrous acid with hydrazine and with azoimide, A., ii, 694.

Oliveri-Mandalà, E., and E. Calderaro, estimation of pyramidone (4-dimethylamino-1-phenyl-2:3-dimethyl-5-pyrazolone) in presence of antipyrine (1phenyl-2:3-dimethyl-5-pyrazolone)and aspirin (o-acetoxybenzoic acid), A., ii, 606.

Olmer. See Dervin.

Olmer, L. J., vapour pressures of mix-tures of 95% ethyl alcohol and ethyl ether, A., i, 534.

composition of the gaseous phase of ethylalcohol-ethylether mixtures in terms of the liquid phase, A., i, 535.

Olmstead, P. S. See Karl T. Compton. Olsson, Urban, poisoning of amylase by heavy metals and organic substances, A., i, 522.

Onnes, Heike Kamerlingh. See Émile Mathias.

Ono, Kashichi, electrolytic reactions of naphthalene and its derivatives. Electrolytic oxidation of naphthalene, A., i, 334.

electrolytic reactions of naphthalene and its derivatives. II. Electrolytic oxidation of a-naphthol, A., i, 726. Onohara, K., physico-chemical state of sugar in the blood, A., i, 904.

Onslow, Herbert, the stability of tryptophan in baryta hydrolysis, A., i,

the nature of the substances precipitated by mercuric sulphate from hydrolysed caseinogen, with reference to the estimation and isolation of tryptophan, A., i, 693.

Onslow, Muriel Wheldale, oxidising enzymes. IV. Distribution among V. Further obserthe higher plants. vations on the oxidising enzymes of fruits, A., i, 485.

Opfermann, See Ferdinand Henrich.

Oppenheimer, Ernst, is there a specific action of bromine salts? A., i, 288. a new method for the estimation of bromine in very small quantities,

A., ii, 273.

Orékhoff, Alex, and Marc Tiffeneau, hydrobenzoin and semipinacolic transpositions in the triarylethanediols with p-methoxyl substitution (auisylglycols), A., i, 566.

Orékhoff, Alex. See also Marc Tiffeneau. Orthner, Ludwig. See Kurt Heinrich

Meyer.

Orton, Kennedy Joseph Previté, and (Miss) Phyllis Violet McKie, preparation of chloropierin from pieric acid and trinitrotoluenes, T., 29.

Osaka, Yûkichi, normalities of standard solutions, A., ii, 124.

Yakichi, and Kinji Andô, Osaka, potassium hydrogen oxalate as a standardiser in alkalimetry, A., ii, 132.

Osakeyhtiö, Wäriteollisuus, preparation of p-nitrotoluene-o-sulphonic acid, A.,

Oseacki, Aleksander, new method for the estimation of uric acid in blood, A., ii, 227.

Ossart, (Mlle.) E. See Albert Berthelot. Osswald, Philipp. See Richard Lorenz. Ost, Hermann, and R. Bretschneider, are hydrocelluloses simple substances?

A., i, 711. Osterberg, A. E., and E. C. Kendall, preparation of certain derivatives

of cyclohexane, A., i, 101. the o-diethylaminocyclohexanylester of

p-aminobenzoic acid, A., i, 727. Osterberg, Emil. See Stanley Rossiter Benedict.

Osterhout, Winthrop John Vanleuven, production of aldehyde by chlorophyll and by aniline dyes in the presence of sunlight, A., i, 263.

Osterhout, Winthrop John Vanleuven. and A. R. C. Haas, a simple method of measuring photosynthesis, A., i, 295.

Ostwald, Wolfgang, swelling of caoutchouc in various liquids, A., i,

Wolfgang, and P. Wolski, Ostwald, dispersoid and colloid chemistry of gypsum. I., A., ii, 47.

Otsuka, Ichiro, the influence of various metallic salts on the formation of bacterial degradation products from amino-acids, A., i, 291.

Ott, Erwin, and Ernst Ohse, simple cyanic and cyanuric compounds. II. Cyanuric triazide, C₃N₁₂, A., i, 231.

See Siegfried J. Ottenstein, Berta. Thannhauser.

Ottmann, Walter. See Ernst Koenigs. See Annemarie. WilhelmSteinkopf.

Ouwehand, (Mlle.) P. Sce JacobBöeseken.

Oxley, A. E., magnetism and atomic

structure. I., A., ii, 82. Oyster, Leone, and Homer Adkins, the preparation of 9(10)-phenanthridone from phenanthrene, A., i, 270.

P.

Packer, John, and Ian William Wark, cupritartrates, T., 1348.

Padberg, C. See Peter Lipp.

Padoa, Maurizio, specific heats, A., ii,

chemico-kinetic study of the velocity of reaction, A., ii, 496.

Paget, Humphrey. See Thomas Anderson Henry.

Palacios, Julio, surface tension of mercury in a vacuum, A., ii, 304.

Palfray, L., the tolyl cyanocampholates and their product of reduction, A., i,

See Norman Victor Palfreeman, H. Sydney Knibbs.

Palmer, Charles Shattuck. See Roger Adams

Palmer, Dorothy Muriel, and William George Palmer, catalytic reduction of ethylene to ethane, A., ii, 541.

Palmer, Leroy S., and Cornelia Kennedy, the relation of plant carotinoids to growth and reproduction of albino rats, A., i, 526.

WilliamPalmer, George, catalytic activity of copper. II., A., ii, 542.

Palmer, William George. See also Dorothy Muriel Palmer.

Palmer, Walter W., Dana W. Atchley, and Robert F. Loeb, regulation of osmotic pressure. I. The effect of increasing concentrations of gelatin on the conductivity of a sodium chloride solution, A., ii, 534.

Panajotakos, Panos, distribution phosphoric acid in the thigh muscles

of the toad, A., i, 529.

Paolini, Vincenzo, complex salts of mercury with phenols, A., i, 902.

Pappenheimer, A. M. See A. F. Hess, and L. von Meysenbug.

Pardee, J. T., Esper S. Larsen, jun., and George Steiger, bementite and neotocite from Washington; identity of caryopilite with bementite, A., ii, 211.

Pariselle, H., the hydrates of pyridine, A., i, 354.

the composition of French oil of turpentine and a-pinene bromide,

A., i, 574. c, *E.* A. Park, See Elmer Verner McCollum.

Parker, Albert. See Harold Baily Dixon. Parker, F. W., concentration and composition of the soil solution, A., i,

effect of finely divided material on the freezing points of water, benzene, and nitrobenzene, A., ii, 430.

Parnas, Jakob K., carbohydrate metabolism of isolated amphibian muscle, A., i, 831.

carbohydrate metabolism the isolated amphibian muscle; the exchange in the muscle of pancreasdiabetic animals, A., i, 832.

mechanical efficiency of the com-bustion processes occurring in isolated amphibian muscle, A., i,

Parnas, Jakob K., and Zofia Krasinska, the metabolism of amphibian larvæ, A., i, 833.

Parnas, Jakob K., and Emilia Laska-Mintz, do subminimal stimuli influence the course of chemical changes in muscle, A., i, 831.

Parravano, Nicola, and C. Mazzetti, transformation of light magnesia into

the dense form, A., ii, 335. Parsons, J. P. See William H. Ross.

Parsons, Leon Woodman. See Gregory Paul Baxter.

Parsons, Thomas Richard, theory of the Barcroft differential blood-gas apparatus, A., i, 632.

Partington, James Riddick, periodic classification of the elements, A., ii, 103.

CXX. ii.

Partington, James Riddick, ratio of the specific heats of air and carbon dioxide, A., ii, 621.

molecular structure and energy, A., ii,

Partington, James Riddick, and D. B. Huntingford, reduction of osmic acid by fats, A., ii, 514.

Pascal, Paul, magnetic properties of the alkaline-earth metals in combina-

tion, A., ii, 535.

influence of chemical constitution on the thermal properties of binary mixtures. IV. The constituents of anthracene oils, A., ii, 574.

magnetochemical examination of constitutions in mineral chemistry. I. The sulphur acids, A., ii, 692.

Pascal, Paul [with M. Garnier], the distillation of nitric acids and of mixtures of sulphuric and nitric acids, A., ii, 504.

Pascal, Paul [with M. Garnier and Labourrasse], the attack of metals by sulphuric-nitric acid mixtures, A., ii, 585**.**

Pascal, Paul, Dupuy, Ero, and M. Garnier, the binary and ternary mixtures obtained in the synthetic manufacture of acetic acid, A., i, 157.

Paschke, Fritz, lignin from straw prepared by treatment with alkali car-

bonate, A., i, 772.

Passerini, M., p-isonitriloazobenzene [p-carbylaminoazobenzene], A., i, 197.

oxidation of p-acetylaminoazobenzene, A., i, 624.

I. Compound of p-isoisonitriles. nitriloazobenzene [p carbylamino-azobenzene], A., i, 743. onitriles. II. Compounds with

isonitriles. aldehydes or ketones and monobasic

organie acids, A., i, 895.

Passerini, M. See also Luigi Alessandri. Passerini, Napoleone, resistance of the vinegar cel to various agents, A., i, 699. Patrick, Walter A. See Frederick K.

Patten, Harrison Eastman, and G. H. Mains, behaviour of neutral ammonium citrate in certain phosphate

solutions, A., i, 214.

the hydrogen-ion concentration at which iron is precipitated from hydrochloric acid solution ammonia, sodium hydroxide, and hydrogen sulphide, A., ii, 218.

Patterson, R. A. See William Duane. Patterson, Thomas Stewart, and Andrew McMillan, the action of ammonia on acetone, T., 269.

Paul, Ludwig, liquid crystals of resin soaps, A., i, 427.

Paul, Theodor, sweetness of "saccharin" and "dulcin," A., i, 109.

Pauli, Wolfgang, the general structure of colloids, A., ii, 246.

Pauli, Wolfgang. See also Mona Adolf. Pauli, W., jun., theoretical considerations concerning the diamagnetism of

monatomic gases, A., ii, 161. Pazourek, J. See Jaroslav Milbauer.

Pearman, Sydney Albert, derivatives of m-xylene, T., 717.

Pearson, Constance E. See Henry G. Greenish.

Pearson, (Mrs.) Leonore Kletz. Arthur Lapworth.

Pease, Robert N., analysis of molecular volumes from the point of view of the Lewis-Langmuir theory of molecular structure, A., ii, 437.

Peiser, E. See Hermann Steudel.

Pélabon, Henri [Joseph Léonard Ferdinand], the resistance of selenium, A., ii, 533.

the electrical resistance of thallium sulphide and selenide, A., ii, 533.

Pelc, Joseph J. See Ben H. Nicolet. Pelizzola, C. See Giuseppe Bruni.

Pelle, U. J., an automatic syphon, A., ii, 255.

Pellizzari, Guido, synthesis of dicyanoo-phenyleneguanidine from o-phenylenediamine, A., i, 363.

passage from guanidine to cyanamide and from diguanide to dicyanodiamide, A., i, 403.

action of cyanogen haloids on phenyl-hydrazine. V. Melamine derivahydrazine. V. Melamine tives, A., i, 620.
Pénau, H. See Eugène Tassilly.

Penfold, Arthur Ramon, a new phenol in the essential oils of the Leptospermum, A., i, 859.

Perkin, William Henry, jun., the action of sodium on phenyl acetate, T., 1284.

Perkin, William Henry, jun., and Sydney Glenn Preston Plant, deriv-atives of tetrahydrocarbazole, T., 1825.

Perkin, William Henry, jun., and Eric Robinson, studies on the configuration of aa'-dibromodibasic acids. dibromoadipic acids; synthesis and resolution of trans-cyclopentane-1:2:3tricarboxylic acid, T., 1392.

William Henry, jun., and Perkin, Harold Archibald Scarborough, resolution of dl-trans-cyclopentane-1:3-di-

carboxylic acid, T., 1400.

Perkin, William Henry, jun., and Alan Francis Titley, epicamphor. II., T., 1089.

Perkin, William Henry, jun., and Stanley Horwood Tucker, the oxidation of carbazole, T., 216.

Perkin, William Henry, jun. See also Robert George Fargher and William Ogilvy Kermack.

Perman, Edgar Philip. See (Miss) Jane Bonnell.

Pernot, J. See J. Barlot.

Perren, Edward Arthur. See Christopher Kelk Ingold.

Perrier, C., presence of zinc in malachite from Chessy, A., ii, 515.

Perrott, George St. John. See Hugh Stott Taylor.

Perucea, E., law of constant proportions and crystalline structure according to W. H. and W. L. Bragg, A., ii, 493.

Peski, A. J. van, the mixed anhydrides of sulphuric acid and carboxylic acids. I. Acetylsulphuric acid, A., i, 302.

Peters, John P., jun., David P. Barr, and Frances D. Rule, the carbon dioxide absorption curve and carbon dioxide tension of the blood of normal resting individuals, A., i, 284.

Peters, R. A., nutrition of protozoa; effect of substituting uranium for potassium in growth media, A., i, 144.

variations in the resistance of protozoon organisms to toxic agents, A., i, 147.

substances needed for the growth of a pure culture of *Colpidium colpoda*, A., i, 530.

Peters, R. A. See also H. Hartridge. Peterson, W. H., and Helen Churchill, the carbohydrate content of the navy bean, A., i, 643.

Peterson, W. H., Edwin Brown Fred, and J. H. Verhulst, fermentation process for the production of acetone, alcohol, and volatile acids from maize cobs, A., i, 836.

Peterson, W. H. See also C. F. Arzberger.

Petow, H. See Peter Rona.

Pettersson, A. See Hans von Euler.

Peytral, (Mlle.) Eglantine, the method of pyrogenic decomposition, at high temperature, of allyl alcohol, A., i, 156.

the mode of pyrogenic decomposition, at high temperature, of benzene and benzaldehyde, A., i, 166.

Peytral, (Mlle.) Eglantine. See also Joseph Auguste Muller.

Pfaff, J. K. See Robert Pschorr.
Pfannenstiel, Adolf. See Richard Willstätter.

Pfau, Alexander St., the estimation of citronellol by the formylation method, A., ii, 600.

Pfeiffer, G. See Heinrich Ley.

Pfeiffer, Paul, the constitution of molecular compounds, A., ii, 501.

Pfister, K., 5-nitro-6-hydroxy-m-toluic acid, A, i, 345.

Pfleiderer, Georg, thermo-elements. I. Thermal and electrical conductivities of copper-phosphorus alloys, A., ii, 296.

Pfleiderer, Georg. See also Franz Fischer.

Phelps, Isaac King, the use of permanganate in the Kjeldahl method modified for nitrates, A., ii, 127.

Phelps, Isaac King, and Herbert Wilkens Daudt, investigation of the Kjeldahl method for estimating nitrogen, A., ii, 127.

Philibert, estimation of urea, ammonia, and amino-acids in urine after precipitation of the ammonia, A., ii, 605.

Philippi, Ernst, and Fedora Auslaender, the dinaphthanthracene series. IV. Bromo-derivatives, A., i, 728.

Philippi, Ernst, Julie Hanusch, and Anton von Wacek, ring closure with polycarboxylic acids. II. Course of the amidation of ethanetetracarboxylic ester, ethanehexacarboxylic ester, and methane-tri- and -tetracarboxylic esters, A., i, 438.

Philippi, Ernst, and Gertrud Rie, new method for the preparation of mellitic

acid, A., i, 729.

Philippi, Ernst, and Reinhard Seka, mechanism of the method of Skraup and Priglinger for the synthesis of dimethylpyrone, A., i, 429.

Philippi, Peter. See Friedrich L. Hahn. Philippson, M., and Germaine Hannewart, physiological action of acids and their solubility in lipoids, A., i, 531.

Phillips, Max, alkali fusions. III. Fusion of phenylglycine-o-carboxylic acid for the production of indigotin, A., i, 811.

Phragmén, Gösta, catalytic decomposition of hydrogen peroxide, A., ii, 499.

Piasecki, S. See Antoine Korczyński. Piccard, Jean, and Jean Henri Dardel, theory of ammonium salts and coordination compounds in organic chemistry, A., ii, 394.

Pickering, Spencer Percival Umfreville, obituary notice of, T., 564.

Pickles, Alwyn, negative adsorption of alkali haloids by wood charcoal, T., 1278.

Picon, M., a new process for preparing sodium derivatives of true acetylenic hydrocarbons, A., i, 645.

Picon, M. See also P. Lebeau.

Pictet, Amé, and Pierre Castan, aglucosyl chloride and a new disaccharide (a-glucosidoglucose), A., i, 396. Pictet, Amé, and Jacques Pictet, the polymerisation of glucosans, A, i,

647. polymerisation of glucosan, A., i, 766. Piotet, Amé, and Joseph Reilly, lævulo-

san, A., i, 544.

Pictet, Jacques. See Amé Pictet.

Picton, N. See John Joseph Sudborough. Pieroni, Antonio, influence of double linkings the co-ordination on number, A., i, 315. chloro-iodo- and iodoso-derivatives,

A., i, 338.

Pieroni, Antonio. See also Angelo Angeli.

Pierrat, M., the solubility of different potassium salts in mixtures of water and alcohol, A., ii, 401.

Pierucci, Mariano, atomic dimensions, A., ii, 583.

Pietrulla, R. See Hermann Thoms.

Pighini, Giacomo, chemical and biochemical investigations on the nervous system under normal and pathological conditions. VIII. Composition of the brain in dementia præcox, A., i, 288.

Pike, William Herbert, obituary notice

of, T., 539.

Pillat, Arnold, identification of bromine in normal human organs, A., i, 78.

Piña de Rubies, Santiago, a new variety of antimoniferous bismuth sulphide, A., ii, 267.

Pinkus, A., ionisation of gases during chemical reactions. III., A., ii, 369.

Pinkus, A., and Martin de Schulthess, ionisation of gases during chemical reactions. II., A., ii, 368.

Pinnow, Johannes, reaction of calcium phosphate with sodium carbonate and sodium hydrogen carbonate, A., ii,

Pinoff, Erwin, electrolytic pole-finder for laboratory use, A., ii, 12.

Pirani, Marcello von, [with E. Lax], point discharge in nitrogen, A., ii, 197.

Pittarelli, Emilio, substances which form acetone in urine and the socalled physiological acetonuria, A., i, 206.

identification of acetaldehyde and formaldehyde in organic liquids and mixtures by means of new, extremely sensitive, colour reactions, A., ii 222.

Pittarelli, Emilio, detection of acetone by degradation to derivatives of formic acid, A., ii, 357.

new method for detecting lactic acid in gastric juice or other organic fluids, A., ii, 418.

Piutti, Arnaldo, action of light on alcoholic and acetonic solutions of

chloropicrin, A., i, 298. Plant, Sydney Glenn Preston, and Nevil Vincent Sidgwick, the absorption of ethylene and propylene by sulphuric acid, A., i, 153.

Plant, Sydney Glenn Preston. See also William Henry Perkin, jun.

Plantefol, L. See André Mayer.

Plauson, Hermann, the colloid mill and its applications, A., ii, 627.

Plausons Forschungsinstitut, G. m. b. H., preparation of alkyl vinyl ethers and their homologues, A., i, 702.

Pleus, R. See F. Lenze.

Plotho, Olga von, the influence of colloidal metal solutions on lower organisms and the reason of this influence, A., i, 82.

the influence of colloidal metallic solutions on mycelia transferred from a different nutrient medium, A., i, 82.

Plotnikow, Joh., photochemical studies. XI. Photochemical equilibria, A., ii,

influence of temperature on photochemical processes. XII., A., ii, 146.

Podgórska, J. See Karol Dziewoński. Poetsch, Walter. See Otto Diels. Pohl, Robert. See B. Gudden.

Pohle, Hans, caoutchouc; two dimethylcaoutchoucs, A., i, 428.

Pohle, Hans. See also Fritz Weigert. Polányi, Michael, non-mechanical nature of chemical processes, A., ii, 179. origin of chemical energy, A., ii,

179.the current produced when a soldered junction is submitted to pressure,

A., ii, 372. Polányi, Michael. See also R. Becker. Polinski, M., detection of formic acid in acetic acid, A., ii, 136.

Pollak, Friedrich. See Alfons Klemenc. Pollitt, Alan A. See Lionel Guy Radcliffe.

Polleck, H, O. See WilliamMcEllroy.

Polonovski, M., detection of oxalic and citric acids, A., ii, 601.

Polonovski, M., and C. Vallée, microestimation of nitrogen and its biological applications, A., ii, 593.

Poma, Gualtiero, chemical action of the

electric discharge. I., A., ii, 570. Poma, Gualtiero, and G. Bassi, chemical action of the electric discharge. II., A., ii, 571.

Poma, Gualtiero, and A. Nesti, chemical action of the electric discharge. III., A., ii, 571.

Pomeranz, H., the complete and partial reduction of nitro-compounds with iron, A., i, 725.

Pommer, M. See Walther Borsche.

Pommereau, Hervé de, the reduction of

ethyl naphthoate and a case of reduction of an alcohol to a hydrocarbon by sodium and absolute alcohol, A., i, 567.

Ponder, Eric, a method for investigating the hæmolytic activity of chemical

substances, A., i, 905.

Ponder, Eric, and Lawrence Howie, the estimation of blood sugar, A., ii, 417.

Pont de Nemours & Co., E. I. du, production of alkylanilines, A., i, 854.

Poole, J. H. J., possibility of separating mercury into its isotopic forms by centrifuging, A., ii, 403.

Pope, Frank George. See Sri Krishna.

Pope, (Sir) William Jackson, isocyanines and carbocyanines; their constitution and their activity as photographic sensitisers, A., i, 690.

Pope, (Sir) William Jackson, and James Leonard Brierley Smith, the interaction of sulphur monochloride and substituted ethylenes, T., 396.

Pope, (Sir) William Jackson. See also

Frederick George Mann.

Poppe, Walter, the dissolution of sodium chloride and sodium chlorate crystals, A., ii, 90.

Porcher, Ch., and A. Chevallier, the distribution of saline substances and mineral elements in milk, A., i, 638.

Porlezza, C., hydro-diffusion of magnesium ammonium sulphate and separation of its component salts, A., ii, 170.

Porter, Alfred William, the vapour pressures of mixtures, A., ii, 377.

Porter, Charles Walter, and Carolyn Steel, oxidation of the Grignard reagent, A., i, 140.

Porter, Charles Walter, and F. H. Thurber, univalent oxygen; preparation and oxidation of mesitol, A., i,

Porter, Lyman E., and Philip Embury Browning, use of gallium ferrocyanide in analysis, A., ii, 277.

Porter, Lyman E. See also Philip Embury Browning.

Porter, (Miss) Mary Winearls, crystallographic descriptions of some pyridine and picoline derivatives, T., 1769. Portes. See Galavielle.

Portevin, A., the electrical resistance of nickel steels, A., ii, 236.

Portevin, A., and P. Chevenard, the retarded solution and premature precipitation of iron carbide in steels and the influence of the initial state on these phenomena, A., ii, 510.
Posnjak, Eugen, and Herbert Eugene

Merwin, the Bucher cyanide process for the fixation of nitrogen, A., i, 500.

Posternak, Swigel, synthesis of inositol hexaphosphate, A., i, 225.

the constitution of the paramolybdates, A., ii, 51.

the hexabasic polymolybdates, A., ii,

the tetrabasic polymolybdates, A., ii, 118.

a system for the molybdates, A., ii, 341.

Potok, J. See Siegmund Reich.
Potter, M. C., influence of electric potential on the velocity of fermentation, A., i, 532.

Pougnet, Jean. See Charles Moureu. Poulton, Edward Palmer. See J. M. H. Campbell, and J. Joffe.

Powell, Alan Richard. See Walter Raymond Schoeller.

Powell, Walter James. See Christopher Kelk Ingold.

Power, Frederick Belding, the detection of methyl anthranilate in fruit juices, A., ii, 357.

Prandtl, Wilhelm, the absorption spectra of europium and samarium, A., ii, 475.

Pratolongo, Ugo, possible improvements in the ebulliometric estimation of alcohol in wines, A., ii, 598.

Pratt, David Doig. See Alexander Killen Macbeth.

Preszfreund, Ernst. See Robert Kre-

Thomas Slater. Price, See Stanley Joseph Green.

and Alexander Pringsheim, Hans, Aronowsky, inulin, A., i, 545.

Pringsheim, Peter, polarisation and intensity of the fluorescence of iodine vapour and its dependence on temperature, A., ii, 287.

influence of elevated temperature on fluorescence and absorption spectra of iodine vapour of constant density, A., ii, 612.

Prior, George Thurland, the meteorites of Mount Ayliff, Simondium, Adare, and Ensisheim, A., ii, 407.

Prior, George Thurland. See also (Sir) Lazarus Fletcher.

Proud, (Miss) Annie Kathleen. See Tom Sidney Moore.

Prud'homme, Maurice, some relationships between the absolute values of the critical temperature and boiling point, A., ii, 83.

relationship between the absolute values of the critical temperature, the boiling point, and the melting point, A., ii, 84.

the three-temperature rule, A., ii, 376. Pschorr, Robert, and J. K. Pfaff, the montan wax of the central German coal, A., i, 4.

Pucher, George W., the preparation of dichloroacetic acid from chloral, A.,

Pulvermacher, Otto, aqueous solutions, A., ii, 171.

Puxeddu, Ernesto, and M. Gennari, physico-chemical investigations on so-called hydroxyazo-compounds, A., i, 366, 623.

Puyal, José, and (Mlle.) Montagne, hypnotics, A., i, 108.

Puyal, José. See also Ernest Fourneau. Pyman, Frank Lee. See Robert George Fargher, and Reginald Lindsay Grant.

Quagliariello, G., protein nitrogen and residual nitrogen in the blood serum of various animals (vertebrates and invertebrates), A., i, 73.

hæmocyanin. I. Refractive index. II. Colloidal properties and iso-

electric point, A., i, 467.

chemical and physical properties of muscle and muscle extracts. Fats, cholesterol, and lipoids in the extract from striped muscle of dogs, A., i, 831.

Quartaroli, Alfredo, Bragg's work, and the law of definite proportions, A., ii,

Quick, A. J. See George L. Clark. Quisumbing, Francisco A., estimation of dextrose and starch by the alkaline permanganate method, A., ii, 67.

R.

Rabaut, Charles, and A. Stillmunkés, rapid estimation of sulphur in urine, A., ii, 556.

Rabe, Arthur. See Emil Fischer.

Rabe, Franz, detection of methyl alcohol

in spirits, A., ii, 220, 281.

Rabe, Paul, and Ernst Jantzen, the cinchona alkaloids. XXII. Synthesis of 3-acetyl-4-methylpyridine and of \$\beta\$collidine, A., i, 438.

Racke, Fritz. See Richard Willstätter. Radeliffe, Lionel Guy, and Alan A. Pollitt, preparation and properties of 1:3:5-trinitrobenzene, A., i, 233.

Radcliffe, Lionel Guy, and Neville Simpkin, n-amylbenzene and some of its derivatives, A., i, 502.

Radsma, W., colloidal chemical action of salts of the alkali metals on the process of phagocytosis, A., i, 204.

Radt, Fritz. See Mar Bergmann. Rahn, Franz. See Heinrich Wieland.

Raistrick, Harold, and Anne Barbara Clark, the cycloclastic power of bacteria. II. A quantitative study of the aerobic decomposition of tryptophan and tyrosine by bacteria, A., i, 479.

Raiziss, George W., and M. Falkov, chemistry of neoarsphenamine [neosalvarsan] and its relation to toxicity, A., ii, 420.

Raiziss, George W., and Joseph L. Gavron, arsenical compounds related to salvarsan, A., i, 370.

Ramann, Emil, and H. Junk, basic exchange in silicates. III., A., ii, 202.

Ramart-Lucas, (Mme.) Pauline. See Albin Haller.

Ramm, Marie. See Friedrich Kehrmann. Ramsauer, Carl, active cross-section of gas molecules for slow electrons, A., ii, 324.

Randall, Merle. See Gilbert Newton Lewis.

Ranedo, José. See José Marín Cano.

Ranke, Alexandra von, reaction in the dark between chlorine and trichlorobromomethane, A., ii, 580.

Rankine, Alexander Oliver, proximity of atoms in gaseous molecules, A., ii, 192.

the similarity between carbon dioxide and nitrous oxide, A., ii, 192.

viscosity and molecular dimensions of gaseous cyanogen, A., ii, 489.

encounters between non-spherical gaseous molecules, A., ii, 584.

molecular structure and energy, A., ii,

Rankine, Alexander Oliver, and C. J. Smith, viscosity and molecular dimensions of gaseous ammonia, phosphine, and arsine, A., ii, 694.

viscosities and molecular dimensions of methane, hydrogen sulphide, and cyanogen, A., ii, 696.

Raper, Henry Stanley, a human enterolith containing choleic acid, A., i, 477.

Rassow, Hermann, a simple method for the determination of melting points and critical temperatures, A., ii, 164.

Rast, Karl, an improvement in Barger's method for the estimation of molecular weight, A., ii, 623.

Rather, J. B., and Ebenczer Emmet Reid, identification of acids. VI. Separation of acids by means of phenacyl esters, A., ii, 356.

Rathsam, G. See Hermann Staudinger. Rau, Madyar Gopal. See John Lionel Simonsen.

Raveau, C., the determination of the number of independent constituents; Dubreuil's rule; the action of water on a mixture of salts, A., ii, 31.

the saturated solutions of two or several substances; application of Le Chatelier's law, A., ii, 386.

is there redissolution of sodium chloride in the presence of a noncongruent solution submitted to evaporation? A., ii, 682.

See Giacomo Luigi Ravenna, Ciro. Ciamician.

Ray, Arthur B., and Frederick Osband Anderegg, oxidation of carbon monoxide by passage with oxygen or air through the silent discharge and over catalysts which decompose ozone, A., ii, 450.

Ray, Francis Earl. See Frederick Daniel Chattaway.

Rây, Jñanendra Nath, syntheses in the thianthren series, T., 1959.

Rây, (Sir) Praphulla Chandra, and Kalikumar Kumar, the molecular conductivity of some sulphonium compounds in acetone, T., 1643.

Rây, Priyadaranjan, and Pulin Vihari Sarkar, compounds of hexamethylenetetramine with complex metallic salts and acids, T. 390.

Rayleigh [Robert John Strutt] (Lord), the light diffused by argon, A., ii, 6. glow of phosphorus; periodic luminosity, and action of inhibiting substances, A., ii, 546.

Raynaud, Albert, the different methods of attack of ochreous minerals, A., ii,

Read, John, and (Miss) Alberta Catherine Pritchard Andrews, studies of halogenohydrins and related derivatives in the cinnamic acid series. I., T., 1774.

Read, John, and Henry George Smith, piperitone. I. The occurrence, isolation, and characterisation of piperitone, T., 779.

Read, J. W., rapid dry combustion method for the simultaneous determination of soil organic matter and organic carbon, A., ii, 348.

Rebenstorff, H., the ignition of phosphorus under a bell jar standing over

water, A., ii, 105.

Reber, Theodor. See Hermann Staudinger.

Rebmann, Adolf. See Emil Baur. Rebuffat, Orazio, transformation quartz into tridymite, A., ii, 44.

Reclaire, A., estimation of acetanilide, A., ii, 604.

Réglade, J. See René Clogne.

Reich, Siegmund, J. Araus, J. Potok, and H. Tempel, the chloro-a-bromocinnamic acids and their affinity for bromine, Λ ., i, 27.

Reich, Siegmund, R. van Wijck, and C. Waelle, additive power of certain styrene derivatives, A., i, 332.

Reichert, Federigo, and Rogelio A. Trelles, arsenic as a normal constituent of soils, A., ii, 519.

Reichert, J. See Aladar Skita.

Reichinstein, David, theory of chemical affinity from the point of view of polar dissociation and the law of mass action, A., ii, 388.

Reid, Ebenezer Emmett. See Oregon B. Helfrich, J. Willard Kimball, Richard L. Kramer, J. B. Rather, Yoshisuke Uyeda, and Thomas Cobb Whitner, iun.

Reihlen, Hans, the space significance of the co-ordination number in polynuclear compounds, A., ii, 193.

Reilly, (Miss) Amy Ada Beatrice. John Norman Collie.

Reilly, Joseph, the distillation of methylcelluloses under reduced pressure, A., ii, 545.

the thermal decomposition of sucrose under reduced pressure, A., 846.

Joseph, \mathbf{and} WilfredJohnHickinbottom, concentration purification of alcoholic fermentation liquids. I. Distillation in steam of certain alcohols, A., ii, 599.

Reilly, Joseph: See also Amé Pictet. Reiman, Clarence K., and Annie S. Minot, absorption and elimination of manganese ingested as oxides and

silicates, A., i, 146.
Reimann, Hobart A. See Stanley P.

Reimann.

Reimann, Stanley P., and Hobart A.
Reimann, blood bicarbonate levels following administration of sodium hydrogen carbonate, A., i, 524.

Reimann, Stanley P., and M. D. Sauter, comparison of blood and lymph bicarbonate after intravenous injection of sodium hydrogen carbonate, A., i, 525.

Reimer, Marie, and Helen Rupert Downes, the preparation of esters by direct replacement of alkyloxy-groups, A., i, 415.

Reindel, Fritz. See Heinrich Wieland. Reiner, L., theory of the tanning (hardening) process in dilute gelatin gels with formaldehyde, A., i, 67.

Reiner, L. See also Heinrich Bechhold. Reinitzer, Friedrich, Siam benzoin. II. Siaresionolic acid, A., i, 351.

Siaresionolic acid, A., i, 351.
Siam benzoin. III. Properties and constitution of lubanol benzoate, A., i, 352.

Reinkober, Otto, characteristic ultra-red frequencies of ammonium salts, A., ii, 144.

ultra-red absorption spectra of solid substances in thin layers, A., ii, 613.

Reis, A., calculation of the heat of sublimation of the alkali haloids from the lattice structure, A., ii, 166.

the crystal lattice, A., ii, 173.

Reisenegger, C. See Heinrich Wieland. Reiss, F., action of surface adhesion in ring reactions, A., ii, 124.

iron as the cause of a formaldehyde and diphenylamine reaction of milk, A., ii, 346.

Reissaus, G. S. See Erich Krause.

Reitstötter, Josef, gold numbers of electrolyte-free fractions of albumin from normal and immune serums and their sensitising action on colloidal suspensions, A., ii, 176. velocity of coagulation of hydrosols

velocity of coagulation of hydrosols of congo-rubin in the presence of carbamide and sucrose, A., ii, 495. Remy, Heinrich, chemistry of the plati-

Remy, Heinrich, chemistry of the platinum metals. I. Existence of bivalent ruthenium compounds, A., ii, 209.

action of hydrochloric acid on the tetroxides of osmium and ruthenium, A., ii, 267.

derivation of acid formulæ from a law of homopolar atom combination, A., ii, 501.

Renaux, E., errors in the detection of albumin in urine, A., ii, 472.

Rengade, Étienne, double saline decompositions and the law of phases, A., ii, 93.

Renouf (Miss) Nora. See Arthur William Crossley.

Renshaw, Roemer Rex, and Frederick K. Bell, trimethylphosphine and its selenide, A., i, 404.

Renz, Carl, the photo-chemistry of lead compounds, A., ii, 477.

Report of the Council, T., 513.

Report of the International Committee on Physico-chemical Symbols, T., 502.

Reppe, Walter. See Kurt Heinrich Meyer.

Retinger, J. See Arthur Hantzsch.

Rettig, F., electrical conductivity of gelatin mixtures and their behaviour during the transition of the gelatin, A., ii, 10.

Reubke, Emil. See Wilhelm Traube. Reverdin, Frédéric, nitration of methylenedi-p-phenetidine, A., i, 564.

Reychler, Albert, starch, A., i, 498, 768.

Reynolds, William Colebrook, on interfacial tension. I. The statical measurement of interfacial tension in absolute units, T., 460.

on interfacial tension. II. The relation between interfacial and surface tension in sundry organic solvents in contact with aqueous solutions, T., 466.

Rheinboldt, Heinrich. See Kurt Hess. Rheiner, Alfred. See W. D. Treadwell. Rheinheimer, Wilhelm. See Heinrich Wieland.

Rhode, Heinrich, the antipyretic action of some derivatives of dimethylphenetidine, A., i, 909.

tidine, A., i, 909.
Rhodes, F. H., and F. E. Hance, freezing-point curve of o-cresol-naphthalene. A., i, 857.

thalene, A., i, 857.

Rhodes, Henry Taylor Fowkes, theory of auxiliary valencies and water of crystallisation, A., ii, 255.

the hydroxyl ring, A., ii, 681. Rhyn, A. J. van. See Erich Ebler.

Rice, Frank E., conductivity cell, A., ii, 78.

Rice, F. O., decomposition of nitric acid in organic nitrations, A., i, 102.

Richards, Theodore William, and Sylvester Boyer, gallium; its electrolytic behaviour, purification, melting point, density, coefficient of expansion, compressibility, surface tension, and latent heat of fusion, A., ii, 264.

Richards, Theodore William, and Emmett K. Carver, critical study of the capillary rise method for determining surface tension, with data for water, benzene, toluene, chloroform, carbon tetrachloride, ether, and dimethylaniline. II., A., ii, 384.

Richards, Theodore William, and Henry Krepelka, a revision of the atomic weight of aluminium; the analysis of aluminium bromide, A., ii, 48.

Richards, Theodore William, and Allan Winter Rowe, heats of dilution and the specific heats of dilute solutions of nitric acid and of hydroxides, chlorides, and nitrates of lithium, sodium, potassium, and cæsium, A., ii, 380.

Richardson, Owen Willans, emission of electrons under the influence of chem-

ical action, A., ii, 442.

Richaud, A., identification of ouabain and strophanthin, and a new test to distinguish between the two glucosides, A., ii, 601.

Richaud, A. See also René Clogne.

Richter-Quittner, M., the calcium of the blood, A., i, 285.

partition of cholesterol and its esters between blood corpuscles and plasma under physiological and pathological conditions, A., i, 285.

Richter-Quittner, M. See also W. Falta. Ricker, Norman H., the luminosity of mercury vapour distilled from the arc in a vacuum, A., ii, 609.

Rideal, Eric Keightley, the catalytic dehydrogenation of alcohols, A., i,

389.

latent heats of vaporisation, A., ii, 431. critical energy increment and Trouton's rule, A., ii, 484.

Rie, Ernst, influence of surface tension on fusion and solidification, A., ii, 164.
Rie, Ernst. See also Ernst Hauser.

Rie, Gertrud. See Ernst Philippi.

Riedel, J. D., Akt. Ges., preparation of derivatives of hexamethylenetetramine, A., i, 14.

amine, A., i, 14.
preparation of derivatives of cholic

acid, A., i, 540.

preparation of additive products of hexamethylenetetramine, A., i, 774. improvements relating to soluble [organic] mercury compounds, A., i, 825.

Riedel, J. D., Akt.-Ges., and Fr. Boedecker, preparation of derivatives of hexamethylenetetramine, A., i, 774.

Riesenfeld, Ernst Hermann [with Alfred Faber, Hans Feld, (Frl.) Italiener, and (Frl.) Margarete Hesse], preparation of sulphur and sulphuric acid from sulphates of the alkaline earths, A., ii, 40.

Riesenfeld, Ernst Hermann, and Hans Feld, the solubility of calcium sulphide in presence of hydrogen sulphide, A.,

ii, 507.

Riesenfeld, Genia, technique of the estimation of lactic acid and the determination of the maximum capacity of lactic acid formation of the muscle, A., ii, 68.

Riiber, Claus Nissen. See E. Berner. Rilliet, Auguste, and Louis Kreitmann, 6-aminopiperonaldehyde and its deriv-

atives, A., i, 567.

Ringer, Otto. See Anton Skrabal.

Rinkes, Inne Jan, the action of sodium hypochlorite on amides. II., A., i,

Rinne, Fritz, the chemical reactions of crystals and their relation to the molecular structure, A., ii, 626.

Rippel, Albert, influence of their reaction on the permanence of cocaine solutions, A., i, 123.

Rippel, August, hemicellulases in resting seeds and their supposed occurrence in higher animals, A., i, 912.

Risseghem, H. van, synthesis of some branched-chain hexanes, A., i, 489. ethylenic isomerism of the aβ-dibromopropylenes, A., i, 492.

the formation of dibutylbutylal in the preparation of butyl alcohol by hydrogenation of crotonaldehyde, A., i, 496.

Ritsert, Kurt. See Hermann Thoms.
Ritter, George J. See Louis Kahlenberg.

Rius y Miró, Antonio. See Erich Müller. Rivat, G. See Victor Grignard.

Rivett, Albert Cherbury David, graphical representation of certain heterogeneous equilibria, A., ii, 685.

Rivett, Albert Cherbury David. See also Frederick William Jeffrey Clendinnen.

Rivilland, C. See Philippe Malvezin.
Riwlin, (Miss) Rassa, liquid crystals.
V. Photographic absorption and extinction measurements, A., ii, 245.

Rixon, Frederic William. See Oliver Charles Minty Davis.

Roaf, Herbert Eldon, an improved form of Barfoed's reagent, A., ii, 525.

Roberts, Howard S., and F. Hastings Smyth, the system, copper-cupric oxide-oxygen, A., ii. 441.

oxide-oxygen, A., ii, 441.

Roberts, Howard S. See also F.
Hastings Smyth.

Roberts, Oswald Digby, the volatile oil from the leaves of the "wild pimento" of Jamaica, A., i, 515.

volatile oil from leaves of Ocimum gratissimum, Linn., A., i, 679.

gratissimum, Linn., A., i, 679.
Robertson, George Ross, the estimation of arseuic in organic compounds, A., ii, 275.

Robertson, George Ross, and Julius Stieglitz, phenylacetic-p-arsonic acid, A., i, 284.

Robertson, John K., the electrodeless discharge in sodium vapour, A., ii,

Robertson, (Sir) Robert, some properties of explosives, T., 1.

Robin, Paul, oxidation of anisaldoxime; anisaldoxime peroxide, A., i, 113. the reagent "iodine+alkali"; action on some organic nitrogenous com-

pounds, A., i, 674. Robin, Paul. See also J. Bougault, and Charles Moureu.

Robinson, Charles S. See E. J. Miller. Robinson, Eric. See William Henry Perkin, jun.

Robinson, (Mrs.) Gertrude Maud. Charles Maxwell McLeod.

Robinson, Robert, the constitution of indigotin, A., i, 452.

the conjugation of partial valencies, A., ii, 545.

Robinson, Robert. See also William Ogilvy Kermack.

Robinson, R. H., acid soil studies. I. A study of the basic exchange between soil separates [mechanical fractions]

and salt solutions, A., i, 644.
Robinson, R. H., and D. E. Bullis, acid soil studies. II. Changes in calcium compounds added to acid soils, A., i, 644.

Robl, Rudolf. See Heinrich Biltz.

Rocasolano, Antonio de Gregorio, the catalytic decomposition of hydrogen peroxide by electrosols and electrogels of platinum, A., ii, 251.

effect of temperature on the catalytic power of platinum and palladium sols, A., ii, 321.

variations in the catalytic power of colloidal systems, A., ii, 390.

variations in the catalytic power of electrosols of platinum, A., ii, 498, 542.

Rockwood, Elbert W., and Krikor G. Khorozian, utilisation of xylose by animals, A., i, 526.

Rodillon, Georges, characteristic reaction of phenol, A., ii, 282.

Roedel, K. See Ferdinand Henrich. WilhelmRoederer, Wilhelm. See

Steinkopf.

Rogers, G. Sherburne, helium-bearing natural gas, A., ii, 697.
Rogers, Harriet. See Arthur J. Hopkins.

Rogers, Homer, Walter C. Holmes, and Walter L. Lindsay, melting point of diphenylamine, A., i, 338.

Rohrbacker, August. See Fritz Straus.

Rolf, Ida P. See Phabus A. Levene. Rolfes, Hans, dimethyldiacetonalkamine methyl - \(\beta\)-dimethylaminoisobutylcarbinol] and dimethyldiacetonamine, A., i, 98.

Rolfes, Hans. See also Ludwig Gattermann.

Rolla, Luigi, and Mario Nuti, estimation of vanadium in steels and iron alloys, A., ii, 597.

Rollet, Alexander. See Alois Zinke. Rollin, Georges. See Louis Gaucher.

Romani, E., thiouram disulphides as vulcanising agents for caoutchouc, A., i, 575.

Romani, E. See also Giuseppe Bruni. Rona, Elisabeth, the action of enzymes under abnormal conditions and the alleged aldehydic character of enzymes, A., i, 68.

Rona, Peter, and E. Bach, action of poisons; the action of atoxyl on serum lipase, A., i, 69.

Rona, Peter, and Paul György, urease and the influence of poisons on its action, A., i, 69.

Rona, Peter, and H. Petow, action of poisons; experiments on the toxic effect of \$\beta'\dihydroxyethyl sulphide and its derivatives on soja bean urease, A., i, 69.

Rooney, J. T., synthetic acetic acid and synthetic acetone; preparation of acetic acid, acetates, and acetone from calcium carbide; production of acetylene and its catalytic hydrogenation; oxidation of acetaldehyde to acetic acid; acetone, A., i, 157.

Roos, E. See Oscar Hinsberg.

Rosa, E. B., E. C. Crittenden, and A. H. Taylor, atmospheric corrections for the Harcourt standard pentane lamp, A., ii, 704.

Rose, A. R., the inversion and estimation of sucrose, A., ii, 465.

Rosenberg, Irene. See Hartwig Franzen. Rosenblatt, (Mme.) M. See Gabriel Bertrand.

Rosenbohm, Ernst. See Israel Lifschitz. Rosenfeld, S. See P. Karrer.

Rosenmund, Karl W., halogen united to ring carbon and its replacement by other substituents. III. Preparation of arsinic and sulphonic acids, A., i, 370.

preparation of derivatives of hydrastin-

ine, A., i, 587.

Rosenmund, Karl W., and Herbert Harms, the replacement of halogen attached to a ring carbon atom by other substituents. II. Replacement of halogen by OH, SH, and SeH, A., i, 103.

Rosenmund, Karl W., and Erich Struck, preparation of carboxylic acids of carbocyclic and heterocyclic compounds, A., i, 176.

nmund, Karl W., and Fritz Zetzsche, the influencing of cata-Rosenmund, lysts, and specifically active

catalysts, A., ii, 320. the influencing of the activity of catalysts. III. and IV. Oxidative catalytic dehydrogenation of alco-

hols. I. and II., A., ii, 393, 631. Rosenmund, Karl W., Fritz Zetzsche, and F. Heise, the influencing of the activity of catalysts. II. Reduction of acid chlorides to alcohol and ester, A., ii, 392.

the influencing of the activity of catalysts. V. Catalytic reduction of esters and aldehydes, A., ii, 631.

Rosenthal, Berta. See A. Schönberg.

Rosenthal, D. See A. Schönberg. Rosenthaler, Leopold, the hydrocyanic acid question. V. Treub's hypothesis, A., i, 484.

the hydrocyanic acid question. Hydrocyanic acid content of the leaves of cherry laurel, A., i, 484.

Ross, William H., James B. Culbertson, and J. P. Parsons, preparation of ethylene by hydrogenation of acetylene, A., i, 761.

Rosseland, S. See Oskar Klein.

Rossem, A. van, and P. Dekker, the chemical examination of antimony sulphides, A., ii, 416.

Rosset, H., application of the determination of miscibility temperature to

alcoholimetry, A., ii, 598.

Rossiter, Edmund Charles, and P. H. Sanders, preparation of zirconia from Brazilian ore and a new method of estimation, A., ii, 341.

Rossner, Ernst. See Günter Scheibe. Rossteutscher, F. See Ferdinand Henrich.

Roth, A. See Walther Borsche.

Roth, Adolf. See Ernst Weitz.

Roth, Walter Adolf, R. Macheleidt, and Irmg. Wilms, new type of combustion bomb made of Krupp's special steel, A., ii, 709.

Rotheim, E. See Leopold Ruzicka. Rouchelman, (Mlle.) N. See Robert

Rouge, E., first products of the chlorophyll assimilation of carbon, A., i, 911.

Roure-Bertrand Fils, physical constants and characteristic derivatives of the principal constituents of the essential oils, A., i, 797.

Roure-Bertrand Fils, certain essential oils, A., i, 797.

labdanum and the analytical characters of the oils of Cistus ladaniferus, L., and Cistus monspeliensis, L., A., i, 798.

Roux, (Mile.) A., and Jh. Martinet, the catalytic action of mercury in the sulphonation of anthraquinone, A., i,

Roux, E. See Eugène Tassilly. Row, P. Q. See Horace A. Shonle.

Rowe, Allan Winter. See Theodore

William Richards.

Rowe, Frederick Maurice, some properties of nitroamines and their derivatives, A., i, 412. Rowe, Frederick Maurice, and (Miss)

Esther Levin, studies in the dihydronaphthalene series. II. The ardihydro-α-naphthols and their derivatives, T., 2021.

Heinrich. Rubens, See TheodorLiebisch.

Rubie, Howard Ernest. See Nevil Vincent Sidgwick.

Ruby, Charles E., equilibrium conditions of the reaction between manganate, permanganate, and manganese dioxide, A., ii, 246.

Ruderer, Helmut. See Robert Kremann.

Rudolph, O., a Bunsen burner constructed from glass tubing, A., ii, 325.

apparatus for drying substances which are unstable at high temperatures, A., ii, 325.

colour reactions of some nitro-substances, A., ii, 604.

Rüdlinger, A. See P. Karrer. Rüggli, Paul, and Adolf Bolliger, constitution of the isoisatogens, **A.**, i, 811.

action of phenylhydrazine on isatogens, A., i, 812.

Ruer, Rudolf, iron-carbon alloys, A., ii,

Ruer, Rudolf, and Julius Biren, solubility of graphite in molten iron, A., ii, 198.

Ruff, Otto, and Erich Kröhnert [with Hans Julius Braun], the relative firmness of the combination sulphurous acid with ammonia and mercury, A., ii, 202.

Ruff, Otto, and Susanne Mugdan, high temperature investigations. The measurement of vapour pressures at high temperatures and the vapour pressures of the alkali haloids, A., ii,

485.

Ruff, Otto, and Paul Schmidt, high temperature investigations. The vapour pressures of the oxides of silicon, aluminium, calcium, and magnesium, A., ii, 486.

Ruff, Otto, and Karl Staib, reduction of inorganic haloids. I. Reduction with aluminium and [the preparation of] aluminium-triarsenic trichloride, A.,

ii, 508.

Ruffle, John, obituary notice of, T., 541. Ruhemann, Siegfried, chromones and flavones, A., i, 430. Ruland, K. See Alfred Benrath.

Rule, Frances D. See John P. Peters,

jun.

Runge, Iris, the velocity of diffusion of carbon in iron, A., ii, 455.

Rupe, Hans, preparation of limonene and pinene nitrosochlorides, A., i, 258.

Rupe, Hans, and W. Diehl, condensation products of phenylhydroxylamine with hydroxymethylene-compounds and carbinols. I. Hydroxymethylenecamphor and phenylhydroxylamine, A., i, 425.

Rupe, Hans, Alfred Krethlow, and Karl Langbein, the influence of constitution on the dispersive power of optically active substances. XIII. [The absorption spectra of optically active substances], A., ii, 473.

Ruppert, F. von. See A. Kircher. Russell, J. See Otto Maass.

znyák, Stefan, physico-chemical investigations on body fluids; the Rusznyák, character of the chlorine in serum

and plasma, A., i, 73.
physico-chemical investigations on
body fluids. II. The condition of the sugar in serum, A., i, 286.

a method for the estimation of chlorides in small quantities of

liquids, A., ii, 272.

Rusznyák, Stefan, and Géza Hetényi, physico-chemical investigations on body fluids. III. The condition of the residual nitrogen, A., i, 286.

Rutherford, (Sir) Ernest, mass of the long-range particles from thorium-C, A., ii, 293.

the stability of atoms, A., ii, 582.

Rutherford, (Sir) Ernest, and James Chadwick, disintegration of atoms by a-particles, A., ii, 293.

artificial disintegration of light elements, A., ii, 671.

Ruzicka, Leopold, polymerisation Δ^2 -cyclohexenones, A., i, 34.

synthetic investigations in the quinine series. II. Quinine-like pounds, A., i, 584.

Ruzicka, Leopold [with E. Rotheim, and W. Kuhn], camphor, A., i, 36. Ruzicka, Leopold [with C. T. Seidel], investigations in the synthetic

quinine series. III. Aliphatic quinatoxins, A., i, 585. Ruzicka, Leopold [with C. T. Seidel,

and E. Hugoson], derivatives δ- and ε-amino-acids, A., i, 591. Ruzicka, Leopold, and Virgilio

Fornasir, syntheses of 4-piperidone,

A., i, 52.

Ruzicka, Leopold, and Jules Meyer, sesquiterpenes. I. Conversion of cadinene into a naphthalene hydrocarbon, A., i, 573.

Ruzicka, Leopold, and H. Trebler, pinene. I. Partial synthesis of pinene from a pinene derivative,

A., i, 36.

II. Attempts to prepare pinene. homopinocamphoric acid pinonic acid; conversion of pinonic acid into tetrahydrocarvone, A., i,

pinene. III. Constitution of nitrosopinene and its transformation

products, A., i, 573. inene. IV. Synthesis of pinopinene. from camphone and a-pinene monocyclic compounds, A., i, 796. Ryschkewitsch, Eugen, the fusion of

carbon, A., ii, 258, 586, 696.

S.

Saar, R. See L. Hartwig.

Sabalitschka, Th., the sodium acetate method for the separation of the bivalent metals from the tervalent metals in the ammonium sulphide group, A., ii, 278.

decomposition of sodium, potassium, ammonium, and aniline hydrogen sulphates and potassium binoxalate and tetraoxalate by solvents, A., ii,

401.

Sabalitschka, Th., and M. Daniel, formation of salts of dicarboxylic acids with aniline and its homologues, A., i, 174.

Sabalitschka, Th., and W. Erdmann, detection of manganese in presence of

phosphates, A., ii, 134.

Sabalitschka, Th., and H. Niesemann, the interference of phosphates in the detection of manganese and its avoidance, A., ii, 278.

Sabalitschka, Th., and H. Schrader, estimation of aniline and its titrimetric

diazotisation, A., ii, 224.

Sabalitschka, Th., and H. Schrader, volumetric estimation of aniline by

diazotisation, A., ii, 468. the decomposition of acid salts of dibasic acids in aqueous solution, especially the influence of bases on the amount of this decomposition, A., ii, 496.

Sabatier, Paul, and Bonasuke Kubota, catalytic hydrogenations by means

of copper, A., i, 347.

action of heat on allyl alcohol in the presence of different catalysts, A., i, 645.

catalytic decomposition of allyl alcohol; special action of different oxides, A., i, 645.

Saccardi, Pietro, pyrrole and melanuria. IV., A., i, 755.

Sachnovska, (Miss) A. A. See A. Zaleski.

Sachs, Georg, decomposition of ethyl thioacetate by mercury salts; a contribution to the chemistry of mercury mercaptides, A., i, 762.

Sachs, P. See Leo Hermanns, and Siegfried J. Thannhauser.

Saha, Megh Nad, elements in the sun (Paper B), A., ii, 4.

the problems of temperature radiation of gases, A., ii, 162.

Sailer, Géza, the action of sodium hyposulphite on metallic salts of the platinum group, A., ii, 513.

Saitô, Kakuji. See Sojirô Kawase. Sakoschansky, Alexander, an extraordinary numerical relationship between calcium and strontium, A., ii, 501.

Salkowski, Ernst [Leopold], the production and properties of pathological melanin. II. The normal pigment of the liver, A., i, 384.

the behaviour of formaldehyde in the animal body, A., i, 478.

the cellulose of lichens and yeast; the concept "hemicellulose" and the autolysis of yeast, A., i, 499.

the action of alkaline hydrogen peroxide on silver [nitrate] solution and the behaviour of silver towards dilute sulphuric acid, A., ii, 586.

Salmon, Cyril Sebastian. See W. F. Darke, and James William McBain. Samec, Maximilian, the chemistry of

the polysaccharides, A., i, 225.

Samec, Maximilian, and H. Haerdtl, plant colloids. IX. Various starches, A., i, 226.

Samec, Maximilian, and Johann Matula, plant colloids. VIII. Some celluloso dextrins, A., i, 397.

Samec, Maximilian, and (Mlle.) Anka Mayer, the fundamental organic substance of amylopectin, A., i, 397.

plant colloids. X. Action of formaldehyde on starch, A., i, 400.

the synthesis of amylopectin by phosphoric esterification of the erythro-

amyloses, A., i, 649. plant colloids. XI. Electro-disintegration of starch solutions, A., i, 707.

Sanchez, Juan A., colour reaction for nicotine and coniine, A., ii, 719.

Sandberg, Marta. See Carl Neuberg. Sanders, P. H. See Edmund Charl See Edmund Charles Rossiter.

Sandow, W. See Friedrich Meyer. Sandoz, Maurice. See Friedrich Kehr-

mann.

Sands, James Edwin. See Frederic Stanley Kipping.

Sanfourche, André, the absorption of oxides of nitrogen by nitric and sulphuric acids, A., ii, 504.

Sarkar, Pulin Vihari. See Priyadaranjan Rây.

Sarma, V. V., cuprous oxide obtained by reduction, A., ii, 264.

Sasa, Hidematsu, preparation of phthalic anhydride, A., i, 511.

Sasaki, Takaoki, condensation of glycine anlivdride with aldehydes; new synthesis of dl-phenylalanine and dl-tyrosine, A., i, 196.

dl- β -2-furyl- α -alanine, A., i, 808.

a colour reaction of glycine anhydride and the dipeptide anhydrides containing glycyl components, A., ii, 358.

Sasaki, Takaoki, and Tokudji Hashimoto, condensation of certain dipeptide anhydrides with benzaldehyde, A., i, 197.

Sasse, Otto, volumetric analysis, A., ii, 218.

Satô, Shinichi. See Heisaburô Kondô. Sauerland, rapid estimation of silver in alloys by a modified silver chloride

method, A., ii, 595. Saunders, F. A., revision of the series in the spectrum of calcium, A., ii,

Sauter, M. D. See Stanley P. Reimann.

Sauvageot, the retarded solution and premature precipitation of cementite in eutectic and hypereutectic carbon steels, A., ii, 553.

See Alexandre Desgrez. Savès.

Saville, William Bristow. See Martin Onslow Forster.

Sawyer, R. A., vacuum hot-spark spectrum of zinc in the extreme ultra-violet region, A., ii, 363.

Sawyer, R. A. See also Robert Andrews Millikan.

Sázavský, V., estimation of sucrose by the inversion method, A., ii, V., estimation of sucrose 418.

Sazerac, Robert, and C. Levaditi, action of bismuth on syphilis and on Nagana trypanosomiasis; treatment of syphilis by bismuth, A., i, 908.

Sbarsky, B. See Alexis Bach.

Sborgi, Umberto, and C. Franco, physico-chemical study of the double decomposition $(NH_4)_2B_4O_7 + 2NaCl$ $\implies Na_2B_4O_7 + 2NH_4Cl$, for the technical preparation of borax, A., ii, 580.

Sborgi, Umberto, and Paolo Marchetti, anodic behaviour of metals in nonaqueous solutions. II. Behaviour of various metals in acetone solutions, A., ii, 572.

Sborgi, Umberto, and Giulio Nocentini, velocity of decomposition and catalysis of sodium perborate, A., ii, 499.

Scala, Alberto, combination of mineral salts with organic colloids and the condition in certain growths, A., i, 287.

Scarborough, Harold Archibald. Albert Eric Cashmore, and William Henry Perkin, jun.

Scatchard, G. See Victor Grignard.

Schaaf, Fr. See Fr. Bürki.

Schaal, R. B., estimation of vanadium in ores and metallurgical products, A., ii, 659.

Schaarschmidt, Alfred, and Max Thiele, preparation of oxidation products of paraffin. I., A., i, 1.

Schadler, Jos., enclosures in Styrian basalt-tuffs, A., ii, 122.

Schaefer, Walter, thermal and crystallographic investigation of the ternary systems, lithium chloride, sodium chloride, potassium chloride calcium chloride, strontium chloride, barium chloride, A., ii, 96. Schaich, W. See Karl von Auwers.

Schaltenbrand, Georg, the arrangement of the periodic system of the elements, A., ii, 445.

Schames, Léon, vapour pressure, A., ii, 165.

Scharnow, B. See John Eggert. Schattner, Anna. See Ludwig Moser.

Schatzkes, J. See Adolf Sieglitz.
Schaum, Karl, and Hermann Lang,
colour of the photochlorides and
colloidal silver. I., A., ii, 506.

Scheer, K., the chloride content of the serum of sucklings, A., i, 905.

Scheffer, Alfred. See Ernst Weitz. Scheffer, Frans Eppo Cornelis, simultaneous reactions of $_{
m the}$ probability, A., ii, 540.

Scheffler, Kurt, colorimetric estimation of arsenic in the urine and blood of persons treated with salvarsan, A., ii, 215.

Scheibe, Günter [with Ernst Rossner], di- and tri-quinolylmethanes united by the pyridine nuclei. II. Di-2quinolylmethane and the syntheses of ψ-isocyanine and quinoline-red, A., i, 451.

Scheibe, Günter, and Ernst Rossner, di- and tri-quinolylmethanes united by the pyridine nuclei. I. Tri-2quinolylmethane, A., i, 62.

Scheibe, Günter. See also Otto Fischer. Scheibler, Helmut, and Martin Schmidt, compounds of thiophen. I. Isomeric n-propyl- and isopropyl-thiophens, A., i, 191.

Schemp, Erich. See Hans Thierfelder. Schenck, Martin, the bile acids. VII. and VIII., A., i, 179.

Schenk, Daniel. See Edgar Wedekind. Schenk, P., the mode of action of 4-\(\beta\)-aminoethylglyoxaline (histamine) on the human organism, A., i, 640.

Scherffig, H. See Friedrich Flade. Scheringa, Klaas, adsorption of water by powdery substances, A., ii, 491.

Schertz, F. N. See Paul H. M.-P. Brinton.

Scheuermann, A. See Richard Lorenz. Schibbe, Gustav. See Carl Tubandt. Schicht, A.-G., Georg, preparation of alcohols of high molecular weight,

A., i, 155. Er., and EmilSchiff, Stransky, magnesium metabolism; influence of subcutaneous injection of magnesium sulphate on the elimination of calcium in the urine of healthy children and in cases of calcuria, A., i, 381.

Schindelmeiser, J., oxidation of diamylene, A., i, 490.
Schiøtz, A. B., electrolysis of cerium salts in aqueous solutions, A., ii,

Schirmeisen, Karl, anthophyllite from Moravia, A., ii, 122.

Schirmer, Oskar, composition of fatty tissue under various physiological and pathological conditions, A., i, 635.

Schlatter, Hugo, catalysis in the manufacture of ethyl ether, A., i, 89.

Schleede, Arthur. See Erich Tiede.

Schleicher, A., relations between crystallographic phenomena and constitution of some organic compounds, A., ii, 25.

limited "free rotation" from the point of view of the theory of symmetry, A., ii, 25.

Schleiffer, Marianne. See Josef Herzig. Schlenker, E. See Hermann Staudinger. Schleussner, C. A., and Hugo Voswinckel, synthesis of γ-coccinic acid and attempt to synthesise cochenillic acid, A., i, 111.

Schlosing, A. Th., the separation of two salts having a common ion, A., ii,

Schlötter, Max, electrolytic oxidation and reduction in presence of metallic salts, A., ii, 620.

Schmajewski, Ch. See Friedrich Kehrmann.

Schmellenkamp, See Karl von Auwers.

Schmid, Fritz.See HansEduardFierz.

Schmidt, glass autoclave, A., ii, 255.

Schmidt, Carl L. A., the reaction of taurine with a-naphthylcarbimide, A., i, 652.

Schmidt, Carl L. A., and A. E. Dart, the estimation of bile acids in bile, A., ii, 284.

Schmidt, Erich, and Erich Graumann, incrustive substance of plants. Method of preparing plant-tissue substances in the pure condition. I., A., i, 912.

Schmidt, Erich, and Richard Schumacher, tetranitromethane. IV. Conversion of tertiary amines into secondary nitrosoamines, A., i, 660.

Schmidt, Erich, Richard Schumacher, and Hans Kuhlmann, preparation of chloro- and bromo-trinitromethane, A., i, 645.

Schmidt, Ernst, \psi-thiohydantoin, A., i, 100.

Schmidt, Gerhard Carl, luminescence of solid solutions, A., ii, 567.

Schmidt, Hans, ethyl- and allyl-selenocarbamides and their alkyl haloids,

Schmidt, K., estimation of metals in alloys of known qualitative composition, A., ii, 595.

Schmidt, Martin. See Helmut Scheibler. Schmidt, Max. See Erich Benary.

Schmidt, Maximilian P., and Alfred Hagenböcker, \psi-azimides. I. and II., A., i, 897.

Schmidt, Paul. See Otto Ruff.

Schmiedel, T., and H. Klencke, preparation of sulphuric acid, A., ii, 196.

Schmitt, Paul. See Hans Stobbe.

Schmitz, Ernst. See Gustav Embden. Schmitz, Henry, wood decay.

Enzyme action in Polyporus volvatus, Peck, and Fomes igniarius (L.) Gillet, A., i, 703.

Schmiz, Eduard, harmony of atomic weights, A., ii, 101.

Schneider, A. See Charles Dhéré.

Schneider, Artur. See Hartwig Franzen.

Schneider, M. See Heinrich Lüers. Schneider, Ralph F. See S. A. Braley. Schneider, W. See Aladar Skita.

Schneider, Wilhelm, and Otto Böger, reduction of coralyne to dihydrocoralyne and a-coralydine, A., i, 801.

Schneider, Wilhelm, and Arnold Köhler, acetyl-N-methylisopapaverine, A., i, 803.

Schneider, Wilhelm, and Fritz Kunau, sulphoacetic acid as condensing agent. III. Acetylnaphthyl methyl 3-acetyl-2-methyl-\beta-naphthaand chromone-a, A., i, 879.

Schneider, Wilhelm, and Heinrich F. IV. Meyer [with Kurt Vollrath], pyranhydrones, a new group of coloured, quinhydrone-like additive compounds, A., i, 680.

Schneider, Wilhelm, and Fritz Seebach, sulphoacetic acid as condensing agent. II. Synthesis of tri-p-anisylbenzene from anisole, A., i, 859.

2:6-diaryl-4-methylpyrylium salts and

pyranhydrones, A., i, 877. Schneiderhöhn, Hans, the transformation of aluminium silicates by salt solutions at temperatures up to 200°, A., ii, 114.

Schneidewind, R., removal of nitrates by means of alcohol, A., ii, 129.

Schoder, Felix. See K. Hugo Bauer. Schoeller, Walter, constitution of acetatomercuriformic esters, A., i, 16.

Schoeller, Walter Raymond, and Alan Richard Powell, investigations into the analytical chemistry of tantalum, columbium and their mineral associ-I. The use of tartaric acid in the analysis of natural tantalocolumbates. II. The separation of zirconium from tantalum and from columbium, T., 1927.

Schoeller, Walter Raymond, and E. F. Waterhouse, gravimetric estimation of bismuth as phosphate and its application to the analysis of ores, A., ii,

Schön, Richard. See Karl Feist.

Schönberg, A. [with D. Rosenthal], o-quinones and 1:2-diketones. II. Action of aqueous ammonia on benzils in the absence of air, A., i, 272.

Schönberg, A., and Berta Rosenthal, o-quinones and 1:2-diketones. III. Constitution of phenanthraquinone-imide anhydride. A., i. 808.

imide anhydride, A., i, 808.

Schönberg, A., and F. Nedzati, o-quinones and 1:2-diketones. I. Explanation of the anhydride of acenaphthenequinoneimide as diacenaphthylenezotide [acenaphthylene-1:2-azine], A., i, 275.

Schoep, A., nature and chemical composition of a mineral containing cobalt found at Katanga, A., ii, 649.

Scholes, S. R., an aid in the estimation of silica, A., ii, 132.

Scholich, Kurt, ternary systems of potassium chloride, sodium chloride, and the chlorides of bivalent metals, A., ii, 97.

Scholl, Roland [with Herbert Hähle], new class of compounds with tervalent carbon, A., i, 872.

Scholl, Roland, Christian Seer, and Alois Zinke, the methyl-1:2-benzanthraquinone series. III., A., i, 677.

Scholtz, F. See Richard Stoermer.

Scholze, Josef. See Adolf Grün. Schomer, Arnold, estimation of yohim-

bine in yohimba bark, A., ii, 360. Schoonover, Warren R. See Albert L. Whiting.

Schoorl, Nicolaas, a sensitive modification of the iodoform reaction for alcohol, A., ii, 355.

Schoorl, Nicolaas, and I. M. Kolthoff, estimation of the alkali metals as sulphates, A., ii, 61.

sulphates, A., ii, 61.

Schotte, Herbert. See Max Bergmann.
Schottky, IV., dynamic quantum weight,
Nernst's theorem, and Gibbs's paradox, A., ii, 179.
Schoutissen. H. A. J. See Jacob

Schoutissen, H. A. J. See Jacob Böeseken.

Schrader, H. See Franz Fischer, and Th. Sabalitschka.

Schrader, Hans, oxidation of aromatic hydrocarbons under pressure, A., i, 329.

Schreiber, G. See Josef Houben.

Schreiner, Erling, new conceptions of electrolytes. I. The degree of dissociation of acetic acid in water and in salt solutions, A., ii, 425.

new conceptions of electrolytes. II.

The introduction of a catalysis coefficient in hydrogen-ion catalysis,

A., ii, 498.

Schroeter, Georg, preparation of methyl bromide, A., i, 217.

o-tetrahydro-β-naphthoylbenzoic acid, its reduction and condensation products, A., i, 861.

Schrötter, Robert von. See Wilhelm Wislicenus.

Schryver, Samuel Barnett. See Albert Charles Chibnall.

Schubart, Ilse. See Wilhelm Steinkopf. Schuchard, E. See Alfred Stavenhagen. Schuckmann, W. von, serologic behaviour of different races of amœbæ,

A., i, 204.
Schudel, Gustav, the anthocyanins of Beta vulgaris, L., and Raphanus

sativus, L., A., i, 485.

Schulek, E., estimation of the saponification number, iodine-bromine number and bromine-substitution number [of fats and waxes], A., ii, 603.

Schulte, E. See Alfred Thiel.

Schulte, J., the influence of cerium on the properties of aluminium and of some of the more important light metal alloys, A., ii, 454.

Schulthess, Martin de. See A. Pinkus. Schultz, Albert, spectrum-analytical investigations of the canal and cathode rays of the positive point discharge in oxygen and nitrogen, A., ii, 234.

Schultz, E. W., and L. R. Chandler, acidity of goat's milk in terms of hydrogen-ion concentration, with comparisons with that of cow's and human milk, A., i, 383.

Schultz, Karl, ultra-violet absorption spectrum of benzene vapour, A., ii, 74.

Schulze, Alfred, vapour tension and molecular volume of toluenebenzene mixtures, A., ii, 378. equilibria in condensed systems, A.,

ii, 388.

the physical properties of mercury, A., ii, 403.

Schulze, Walter. See Wilhelm Traube. Schumacher, Richard. See Erich Schmidt.

Schumb, Walter Cecil. See Grinnel

Schwalbe, Karl Gustav, and Ernst Becker, differentiation between oxycellulose and hydrocellulose by titration, A., i, 308.

Schwarz, Erik. See Sigmund Fränkel. Schwarz, Robert, silicic acid gels, A., ii,

Schwarz, Robert [with A. Haacke], the binary systems of lithium orthosilicate with zirconium orthosilicate and calcium orthosilicate, A., ii, 452.

Schwarz, Robert, and Hans Bausch, the introduction of silicic acid into the nucleus of complex compounds, A., ii, 404.

Schwarz, Robert, and Erich Konrad, the existence of gaseous hydrides of zirconium and thorium, A., ii, 645.

Schwarz, Robert, and Heinrich Stock, photochemical decomposition of silver bromide. I., A., ii, 614.

Schwarzer, Gustav. See Hans Lieb.

Schweizer, Karl, production of glycerol by alcoholic fermentation, A., i, 757. application of the precipitometer and of an apparatus for the estimation of catalase to the study of the course of alcoholic fermentation, A., ii, 227.

Schwen, Gustav. See Wilhelm Steinkopf.

Schwendenwein, Hugo, ionic size and lattice energy of the alkali haloids for atom models with cubic symmetry, A., ii, 310.

Schwyzer, Jeanne E. See Alfred Werner.

Scott, John Richard, and Julius Berend Cohen, on some carbamido-acids and their hydantoins, T., 664.

Sears, George W., the separation and detection of arsenate and arsenite, A., ii, 347.

Sease, V. B. See Benjamin Franklin Lovelace.

Seebach, Fritz. See Wilhelm Schneider. Seeger, A. See Walther Dilthey.

Seeliger, Rud, conditions for the excitation of the mercury lines, A., ii,

Seeliger, Rud, and D. Thaer, arc and spark spectra of the alkalis, alkaline earths, and earths, A., ii, 566.

Seer, Christian. See Roland Scholl.

Segnitz, Paul H., catalysis of permanganate titrations, A., ii, 125.

Seidel, C. T. See Leopold Ruzicka. Seidel, F. See Alfred Eckert.

Seidenberg, Armin, the quantitative separation of the lead salts of the saturated from the less unsaturated fatty acids, A., i, 705. Seka, Reinhard. See Ernst Philippi.

Sekera, Franz, periodic precipitation and coagulation by electrolytes, A., ii, 31.

Semon, Waldo L. See Fred H. Heath. and Herman V. Tartar.

Senderens, Jean Baptiste, catalytic dehydration of amyl alcohol from fermentation, A., i, 4.

catalytic decomposition of the chloroacetic acids, A., i, 157.

Senderens, Jean Baptiste, and Jean Aboulenc, catalytic decomposition of the bromoacetic acids and of mixtures of bromine and acetic acid, A., i,

Sernagiotto, Emilio, preparation of cyanogen chloride, A., i, 500.

Seroin, J. See A. Muguet.

Sertz, H., estimation of small quantities of fluorine in natural products by means of Hempel and Scheffler's gasometric method, A., ii, 706.

Seyewetz, Alphonse. See Auguste Lumière.

Seyfried, Lillian M. See William Ham: mett Hunter.

Shaffer, Philip Anderson, antiketogen-I. An in vitro analogy. The ketogenic-autiketogenic balance in man, A., i, 754.

Shaffer, Philip Anderson, and A. F. Hartmann, the iodometric estimation of copper and its use in sugar analysis. I. Equilibria in the reaction between copper sulphate and potassium iodide, A., ii, 417.

the iodometric estimation of copper and its use in sugar analysis. II. Methods for the determination of reducing sugars in blood, urine, milk, and other solutions, A., ii, 417.

Shanks, W. F., choline as a precursor

of creatine, A., i, 530. Shannon, Earl V., naumannite from Idaho, A., ii, 52.

boulangerite, bismutoplagionite, and jamesonite, A., ii, 52.

tetrahedrite, triplite, anthophyllite, etc., A., ii, 458.

amesite, corundophilite, and chromium-bearing chlorites, A., ii,

minerals from the tungsten mine at Trumbull, Connecticut, A., ii, 459.

ferroanthophyllite from Idaho, A., ii, 703.

Shannon, Earl V. See also D. Foster Hewett.

Shaver, IV. W. See John Cunningham McLennan.

Shaw, W. M. See Walter Hoge Mac-Intire.

Sharby, J. H., vapour pressures and the isothermals of vapours, A., ii,

Shedd, Oliver March, a short test for easily soluble phosphate in soils. A .. ii, 274.

Sheldon, H. Horton, charcoal activation, A., ii, 88.

Sheppard, Samuel Edward, and Felix A. Elliott, photometric methods and apparatus for the study of colloids, A., ii, 310.

Sheppard, Samuel Edward, and S. S. Sweet, the elastic properties of gelatin jellies, A., ii, 311.

Sheppard, Samuel Edward. See also Felix A. Elliott.

Sherk, D. C. L., urethanes of thymol and carvacrol, A., i, 239, 340.

Sherrill, Elmer, centrifugal method for estimating potassium, A., ii, 348.

Sherwin, Carl P., and Walter A. Hynes, the metabolism of nitrobenzaldehydes and nitrophenylacetaldehyde, A., i, 754.

Sherwood, Frank F. See Ellis I. Fulmer. Shibata, Yaji, and Kenjirô Kimura, Japanese minerals containing rare elements. I. Analysis of naegite, fergusonite, and monazite, from Naegi, Mino Province, A., ii, 269.

Shields, John, obituary notice of, T., 569. Shimizu, Shiu. See Motooki Matsui.

Shimomura, Akira, and Julius Berend Cohen, physical and physiological properties of some hydrogenated quinoline compounds, T., 740.

a new method for the resolution of asymmetric compounds, T., 1816.

Shinozaki, Yeinosuke, essential oil of Juniperus taxifolia, A., i, 351.
essential oil of Vitex trifolia, A., i, 351.
essential oil of dokudame, A., i, 574.
essential oil of kokusagi, A., i, 574.
composition of the essential oil of aburachan, A., i, 679.

Shipley, P. G. See Elmer Verner Mc-Collum.

Shive, John W. See Linus H. Jones.
Shonle, Horace A., and P. Q. Row, new benzyl esters possessing an antispasmodic action, A., i, 341.

Short, James J. See Victor Caryl Myers. Short, Wallace Frank, a new method for the preparation of α-acylphenylhydrazines, T., 1445.

azines, T., 1445.
Shorthose, D. N. See C. Frewen Jenkin.
Shutt, William James. See Robert
Owen Griffith.

Sidgwick, Nevil Vincent, and Wilfrid Major Aldous, influence of position on the solubility and volatility of the mono- and di-nitrophenols, T., 1001.

Sidgwick, Nevil Vincent, and (Miss) Elinor Katharine Ewbank, the stability of tautomeric formaldehydephenylhydrazones, T., 486.

the influence of position on the solubilities of the substituted benzoic acids, T., 979.

Sidgwick, Nevil Vincent, and Howard Ernest Rubie, the solubility and volatility of the chloro- and nitro-anilines and of their acetyl derivatives, T., 1013.

Sidgwick, Nevil Vincent. See also Sydney Glenn Preston Plant.

Sido, Max, cyclic imide ethers of diglycollic acid as sweetening agents, A., i, 447.

Sieber, Wilhelm. See Theodor Curtius. Siebert, Sigurd. See Edmund Speyer.

Sieburg, Ernst, the physiological action of some naturally occurring hydroxy-coumarins (umbelliferone, daphnetin, aesculetin, chrysatropic acid, and herniarin), A., i, 289.

Sieburg, Ernst, and Erich Harloff, the behaviour of substances of the dibenzil series (dibenzyl, hydroxybenzoin, deoxybenzoin, benziln, benzilic acid) in the organism, A., i, 146.

Sieburg, Ernst, and Karl Vietense, the biochemical behaviour of glycollic and oxalic acids, especially against the cells of isolated human organs, A., i, 145.

Siefert, Fritz. See Karl Fleischer. Sieg. B. See H. von Wartenberg.

Siegbahn, Manne, Axel E. Lindh, and Nils Stensson, a process of spectrum analysis by means of Röntgen rays, A., ii, 344.

Siegens, Hans. See Conway von Girsewald.

Sieglitz, Adolf, the fluorene series. III. Derivatives of ethyl dibromofluoreneglyoxylate, A., i, 110.

Sieglitz, Adolf, and H. Jassoy, the fluorene series. VI., A., i, 791.

Sieglitz, Adolf, and J. Schatzkes, the fluorene series. V. 2:7-Dichlorofluorene, A., i, 781.

the fluorene series. IV. Synthesis of isodiphenic acid, A., i, 792.

Sieglitz, Adolf. See also Fritz Mayer.
Siegwart, Joseph. See Hermann Staudinger.

Sierp, Fr. W. See Rudolf Friedrich Weinland.

Sieverts, Adolf, and A. Hermsdorf, detection of hydrogen cyanide in air, A., ii, 224.

Silberrad, Oswald, researches on sulphuryl chloride. 1. Influence of catalysts; a convenient method of chlorinating benzene, T., 2029.

Silver, Leonard. See William Arthur Bone.

Simion, F., new forms of Soxhlet extraction apparatus, A., ii, 501.

Simmonds, Charles, obituary notice of, T., 542.

Simmonds, Nina. See Elmer Verner McCollum.

Simmons, C. W., J. R. Gordon, and H. C. Boehmer, estimation of lead as chromate, A., ii, 63.

Simmons, Thomas Arthur. See Henry

Bassett, jun.
Simms, H. S. See Phæbus A. Levene.
Simon, Halo, action of glycerol. Action of glycerol on the blood, A., i,

Simon, Kurt. See Hans Lecher.

Simon, Louis Jacques. See Georges Chavanne, and Ch. Mauguin.

Simon, O. See Walther Dilthey.

Simons, Harold Lester. See Harry Linn Fisher.

Simons, Lewis, \(\beta\)-ray emission from thin films of the elements exposed to Röntgen rays, A., ii, 77.

Simonsen, John Lionel, the essential oil from Andropogon Jwarancusa, Jones, and the constitution of piperitone, T., 1644.

essential oil from the leaves of Skimmia laureola, A., i, 515.

Simonsen, John Lionel, and Madyar Gopal Rau, synthesis of 1:6-dihydroxy-2-methylanthraquinone, T., 1339.

Simpkin, Neville. See Lionel Guy Radcliffe.

Simpson, Edward Sydney, a graphic method for the comparison of minerals with four variable components forming two isomorphous pairs, A., ii,

Sinai, Martha. See Fritz Zuckerkandl.

Sindlinger, F. See Felix Mach. Singalowsky, N. See H. Wolff.

Singer, Erna. See Anton Skrabal.

Singh, Bawa Kartar, phototropism in solution. I., A., i, 351.

Singh, Bawa Kartar, and Miri Lal, studies in substituted quaternary azonium compounds containing an asymmetric nitrogen atom. Additive compounds of thiocarbamide with azonium iodides, T., 210.

Singh, Bawa Kartar, Mahan Singh, and Jiwan Lal, studies on the dependence of optical rotatory power on chemical constitution. IV. Aryl derivatives of bisiminocamphor, T., 1971.

Singh, Mahan.See Bawa Kartar Singh.

Sisson, Warren R. See Willey Denis. Sjöberg, Knut, enzymatic investigations of certain green algae, A., i,

Sjöberg, Martin. See Bror Holmberg.

Skaupy, Franz, the separation of gases and the production of pressure differences in the positive column in the electrical discharge in rare gases, and its explanation on the basis of elastic impacts of electrons; application to the case of isotopes of the rare gases, A., ii, 154.

influence of the ionising tension on chemical reactions in gaseous mixtures, particularly in the case of the inert gases, A., ii, 178.

chemical affinity of the inactive gases, A., ii, 198.

transport numbers of liquid amalgams, A., ii, 298.

specific heat and inner atomic vibrations, A., ii, 300.

Skita, Aladar [with H. Kaden, Hans Häuber, and W. Schneider], deter-mination of the configuration of stereoisomeric polymethylenes, A., i, 503.

Skita, Aladar [with F. F. Nord, J. Reichert, and P. Stukart], dihydrothebaine, dihydrothebainone, dihydrothebainol, A., i, 684.

Skrabal, Anton, and Grete Muhry, hydrolysis of ethyl oxamate, A., ii, 581.

Skrabal, Anton, and Otto Ringer, the rate of hydrolysis of ethyl orthoformate, A., ii, 581.

Skrabal, Anton, and Erna Singer, alkaline hydrolysis of esters symmetrical homologues of oxalic acid, A., ii, 34.

Slator, Arthur, yeast crops and the factors which determine them, T.,

Sligh, T. S., jun., the construction of platinum resistance thermometers and immersion heating coils of low lag, A., ii, 299.

Slosse, A., physiological significance of formic acid, A., i, 203.

Slyke, Donald D. van, acidosis. XVII. The normal and abnormal variations in the acid-base balance in the blood, A., i, 828.

Slyke, Donald D. van. See also J. Harold Austin.

Smart, Bertram James, obituary notice

of, Ť., 544. Smekal, Adolf, absorption boundaries

of the L-series, A., ii, 144. relationship of the actinium series branch of the uranium-radium series, A., ii, 149.

spatial atomic models, A., ii, 189. fine structure of the Röntgen spectra, A., ii, 292.

Smekal, Adolf, Rutherford's discovery of a new light atom nucleus, A., ii, 478. fine structure of Röntgen spectra. II. L-series, A., ii, 615. fine structure of Röntgen spectra.

III. M-series and the principle of selection, A., ii, 615.

explanation of Röntgen spectra and the constitution of the atom, A., ii, 674.

Smiles, Samuel, and Ernest Wilson McClelland, derivatives of 3-oxy(1)thionaphthen, T., 1810.

Smiles, Samuel, and (Miss) Jessie Stewart, m-dithiobenzoic acid, T.,

Smirnov, Alexander P., the constitution of N-aryl derivatives of 4-pyridone, **A.**, i, 594.

paired cyclamines. I. 2-(2-Quinolyl)cyclamines; valency formula of quinoline, A., i, 812.

Smirnov, Alexander P. See also P. Karrer and Alfred Werner.

Smit, J. W. A. Haagen, the estimation of gold by cupellation and the examination of large quantities of gold destined for the manufacture of coinage, A., ii, 354.

Smith, C. J.See Alexander Oliver

Rankine.

Smith, Charles R., osmosis and swelling of gelatin, A., i, 749.

Smith, Davy Bickford, & Cie. Paul René de Wilde.

Smith, Donald P., electrical conduction of an hydrogen alloy, A., ii, 423.

Smith, H. D., radiating potentials of nitrogen, A., ii, 77.

Smith, Henry George. See John Read. Smith, Homer W., nature of secondary valence. II. Partition coefficients, A., ii, 315.

nature of secondary valence. I., A., ii, 324.

Smith, J. D. Main. See Gilbert Thomas Morgan.

Smith, Julian F. See Gerald Eyre Kirkwood Branch.

Smith, James Hollingsworth, estimation of sodium hyposulphite, A., ii, 652.

Smith, James Leonard Brierley. See (Sir) William Jackson Pope. Smith, L., the efficiency of certain fractionating columns in distillation in a vacuum; laboratory some designs, A., ii, 575.

Smith, Leighton B. See Arthur Amos Noyes.

Smith, L. W., J. H. Means, and M. N. Woodwell, distribution of carbon dioxide between cells and plasma, A., i, 474.

Smith, Millard, estimation of chlorides in trichloroacetic acid filtrates from whole blood and plasma, A., ii, 272.

Robert Christie. See Robert Smith, Wright.

Smith, Samuel C. See Alvin Sawyer Wheeler.

Smith, Todd O., and O. Butler, relation of potassium to the growth of plants, A., i, 482.

Smith, W. C. See V. E. Grotlisch.

Smits, Andreas, the validity of the law of partition for the equilibrium between a mixed crystal phase and a coexisting liquid, A., ii, 246. Smits, Andreas, and R. Ph. Beck, elec-

tromotive behaviour of magnesium,

I., A., ii, 402.

Smits, Andreas, and G. J. de Gruijter, the electromotive behaviour of aluminium. II., A., ii, 371.

Smits, Andreas, L. van der Lande, and P. Bouman, existence of hydrates in aqueous solutions, A., ii, 385.

Smits, Andreas, and J. Spuyman, the thermo-electric determination transition points, A., ii, 246.

a thermo-electrical differential method for the determination of transition points of metals at comparatively low temperatures, A., ii, 386.

Smodlaka, N., the esterification of dimethylaminoisophthalic acid. Preparation of methyl 4 aminoisophthalate, A., i, 418.

the esterification of dimethylaminoisophthalic acid. II. Preparation of 4-dimethylaminoisophthalic acid. III. Esterification of 4-dimethylaminoisophthalic acid, A., i, 674.

Smorodincev, A., extractive substances of muscular tissue. XX. Carnosine and its compounds. I., A., i, 192.

Smyth, F. Hastings, and Howard S. Roberts, system, cupric oxide, cuprous oxide, oxygen, A., ii, 98. Smyth, F. Hastings. See also Howard

Š. Roberts.

Smyth, H. D., and Karl T. Compton, the effect of fluorescence and dissociation on the ionising potential of iodine

vapour, A., ii, 364.

Snapper, I., formation and excretion of hippuric acid in man, A., i, 834.

Snoo, K. de, the amount of amino-acids in blood, A., i, 828.

Snyder, Robert S. See Ray E. Neidig. Société Anonyme de Produits Chimiques, production of acetaldehyde from acetylene, A., i, 706.

Société Chimique des Usines du Rhône, new process of manufacture of βdialkylaminoethylaminobenzoic alkyl esters, A., i, 26.

preparation of dialkylaminoethyl derivatives of theobromine, A., i, 126.

preparation of n-butyl p-aminobenzoate, A., i, 244.

production of hydroxyaldehydes and their derivatives, A., i, 420.

preparation of ethylidene diacetate, A., i, 535.

preparation of disubstituted 2:4-diketotetrahydro-oxazoles, A., i, 737.

Society of Chemical Industry in Basle, acyl derivatives of p aminophenyl ethers, A., i, 339.

preparation of compounds of the morphine alkaloids with derivatives of barbituric acid, A., i, 354.

preparation of dibenzylaniline-4:4'-disulphonic acid and ethylbenzylaniline-4'-sulphonic acid, A., i, 715.

preparation of aralkyl esters of 2phenylquinoline-4-carboxylic acid, A., i, 737.

preparation of α aminoauthraquinone, A., i, 871.

Soddy, Frederick, the atomic volume of isotopes, A., ii, 698.

Söderquist, Ragnar, optically active α-amino-αβ-diphenylethanes, A., i, 235.

Soep, Leo, a Soxhlet apparatus for extraction with warm solvents, A., ii, 212.

Sörensen, Sören Peter Lauritz, the albumin of the white of hens' eggs, A., i, 749.

Sohl, G. T. See Thomas G. Thompson. Somieski, Karl. See Alfred Stock.

Sommelet, Marcel, condensation of esters with the esters of α-bromo-acids in the presence of zinc; ethyl γ-ethoxy-acetoacetate, A., i, 646.

acetoacetate, A., i, 646.

Sommelet, Marcel, and P. Couroux, a method of preparation of succinylsuccinfe ester, A., i, 540.

Sommelet, Marcel, and J. F. Hamel, the condensation of chloroacetic ester with magnesium in the presence of ethyl acetate, A., i, 646.

Sommerfeld, A., criticism of Bohr's theory of light emission, A., ii, 567.

Sondal, J. A., estimation of carbon in aluminium, A., ii, 654.

Sonn, Adolf, certain derivatives of paeonol, A., i, 279.lichen products. III. Determination

lichen products. III. Determination of the constitution of divarinol, A., i, 414.

Sonn, Adolf, and Frilz Benirschke, preparation of certain alkyloxyquinolines and of their tetrahydro-derivatives, A., i, 805.

Sordelli, Alfredo. See Raul Wernicke. Soulan, H., the influence of light on the conductivity of fluorescent liquids, A., ii, 288.

South Metropolitan Gas Company, and Harold Stanier, improvements in the manufacture of certain naphthylaminesulphonic acids, A., i, 504.

Späth, Ernst, synthesis of sinapin, A., i, 28.

loturine, A., i, 50.

constitution of laudanine, A., i, 50.

Späth, Ernst, and Rudolf Göhring, synthesis of ephedrine, \(\psi\)-ephedrine, their optical antipodes and racemic compounds, A., i, 45.

Spencer, James Frederick, Cottrell's ebullioscopic apparatus, A., ii, 240.

Spencer, Leonard James, identity of Trechmann's "β-tin" with stannous sulphide, A., ii, 266.

Speyer, Edmund, Else Freund, Walter Freund, Helmuth Freund, and Liselotte Freund, preparation of a derivative of thebaine, A., i, 803.

Speyer, Edmund, and Sigurd Siebert, reduction of dihydrothebainone, A., i,

Speyer, Edmund. See also Martin Freund.

Spiers, Charles William. See Maximilian Nierenstein.

Spirescu, (Mlle) Hélène. See Eugène Ludwig. Spire Karl Acovidation and paired

Spiro, Karl, β -oxidation and paired linkings, A., i, 639.

Spoehr, Herman Augustus, estimation of the pentose sugars, A., ii, 714.

Spry, Fletcher H. See James Munsie Bell.

Spuyman, J. See Andreas Smits. Staden, A. von. See Adolf Windaus. Stäger H. See Volkman Kohleshitten

Stäger, H. See Volkmar Kohlschütter. Stahrfoss, Knut, the fluorene series, A., i, 335.

action of o-aminothiophenol on oquinones. II. and III., A., i, 457, 794

Staib, Karl. See Otto Ruff.

Stallmann, Otto. See Kurt Brand.

Staněk, Vladimir, micro-chemical estimation of nitrogen by Kjeldahl's method, A., ii, 557.

Stanier, Harold. See South Metropolitan Gas Company.

Stanley, G. H., cyanometric assay of nickel, A., ii, 352.

Stark, Johannes, criticism of Bohr's theory of the emission of light, A., ii, 232.

Staszewski, W., measurement of electroosmotic tensions in liquids of low conductivity, A., ii, 13.

Statescu, C., the number of molecules per cubic centimetre of oxygen obtained by the dispersion, A., ii, 399.

Staub, H., enzyme formation [in the organism], A., i, 475.

Staudinger, Hermann, aliphatic diazocompounds. XXIII. Formulation of ethyl diazoacetate and of diazoanhydrides. A., i, 327.

anhydrides, A., i, 327.

Staudinger, Hermann [with Helmut Wilhelm Klever, St. Bereza, and A. Corvi], ketens. XXXV. Action of diphenylketen on thioketones, A., i, 34

Staudinger, Hermann, Alice Gaule, and Joseph Siegwart, aliphatic diazo-compounds. XX. Reduction by means of hydrogen in presence of palladium, A., i, 323.

Staudinger, Hermann, Henri Goldstein, and E. Schlenker, oxalyl chloride. VI. Friedel and Crafts' reaction with oxalyl chloride. A., i. 432.

with oxalyl chloride, A., i, 432.
oxalyl chloride. VII. Friedel and
Crafts' reaction with iminochloride
derivatives of oxalic acid, A., i,
433.

Staudinger, Hermann, and L. Hammet, aliphatic diazo-compounds. XXI. Constitution of the hydrazones, especially of ethyl mesoxalatehydrazone, A., i, 324.

Staudinger, Hermann, L. Hammet, and Joseph Siegwart, aliphatic diazo-compounds. XXII. Reduction of ethyl diazoacetate, A., i, 326.

Staudinger, Hermann, G. Rathsam, and F. Kjelsberg, ketens. XXXIV. Diphenylthioketen, A., i, 33.

Staudinger, Hermann, and Theodor Reber, ketens and aliphatic diazocompounds, A., i, 245.

Staudinger, Hermann, and Joseph Siegwart, thionbenzoyl chloride, A., i, 25.

action of aliphatic diazo-compounds on thicketones, A., i, 43.

Staudinger, Hermann, and Joseph Siegwart [with E. Anthes, H. Bommer, and O. Gerhardt], action of thio-acid chlorides on aliphatic diazo-compounds, A., i, 43.

Stavenhagen, Alfred, and E. Schuchard, behaviour of explosive mixtures of gases at low pressures, A., ii, 33.

Stechow, M. See Arthur Hantzsch.
Stedman, Edgar, a new degradation
product of physostigmine. T.. 891.

product of physostigmine, T., 891. Steel, Carolyn. See Charles Walter Porter.

Steenbock, H. See E. G. Gross, and Edwin Bret Hart.

Steenhauer, A. J. See Leopold van Itallie.

Stehle, Raymond L., gasometric estimation of nitrogen and its application to the estimation of the non-protein nitrogen of blood, A., ii, 128.

gasometric estimation of nitrogen, Λ., ii, 557.

gasometric estimation of urea in urine, A., ii, 605.

Stehle, Raymond L., and Arthur C.
McCarty, effect of hydrochloric acid
ingestion on the composition of the
urine in man, A., i, 755.

Steibelt, Werner. See Richard Willstätter.

Steiger, A. L. von, the summation method of molecular refraction, particularly in the case of aromatic hydrocarbons, A., ii, 473.

Steiger, George. See J. T. Pardee.

Steigmann, Albert, a new transport apparatus, A., ii, 13. reduction of sodium silver thiosulphate by hyposulphite. I. and II.,

ate by hyposulphite. I. and II., A., ii, 46, 147. photographic colloid-chemical crystal-

lisation processes, A., ii, 568.

Steinberg, R. A., effect of zinc and iron compared with that of uranium and cobalt on the growth of Aspergillus, A., i, 482.

Steinführer, Paul. See Hartwig Franzen. Steinkopf, Wilhelm, thiophen-mercury

compounds, A., i, 630.

Steinkopf, Wilhelm [with Hans Winternitz, Wilhelm Roederer, and Auron Wolynski], the contact decomposition of cholesterol; the theory of petroleum formation, A., i, 24.

formation, A., i, 24.
Steinkopf, Wilhelm, and Kurt Buchheim, action of cyanogen bromite on triphenylphosphine. A., i, 469.

triphenylphosphine, A., i, 469.
Steinkopf, Wilhelm, and Johannes Müller, organic compounds of arsenic.
II. Action of cyanogen bromide on triethylarsine, A., i, 404.

triethylarsine, A., i, 404.

Steinkopf, Wilhelm, and Annemarie
Otto, the halogenation of thiophen
by means of acetylchloroamide and
acetylbromoamide A i 579.

acetylbromoamide, A., i, 579.
Steinkopf, Wilhelm, and Ilse Schubart, thiophen series. X. The preparation and reduction of thienyl ketones, A., i, 579.

Steinkopf, Wilhelm, and Gustav Schwen, organic compounds of arsenic. IV.
Action of alkyl haloids on cacodyls and a new mode of formation of tetra-alkyl-(aryl)-arsonium triiodides, A., i, 694.

preparation of methyl bromide, A., i, 841.

Steinkopf, Wilhelm, and Artur Wolfram, organic compounds of arsenic. III. The action of cyanogen bromide on phenylcyclopentamethylenearsine, A., i, 471.

Steinruck, A. See Alfred Heiduschka.
Steinwehr, Helmuth von, dependence of the heat of vaporisation of water on the temperature, A., ii, 167.

Steinwehr, Helmuth von. See also Wilhelm Jaeger.

Stemmer, Johann. See Karl Fleischer. Stensson, Nils, doublets of the K series of the Röntgen spectra, A., ii, 140.

Stensson, Nils. See also Manne Siegbahn.

Stenström, Wilhelm. See William Duane.

Stephens, J. G., a new method of measuring molecular weights, A., ii, 324.

Stephenson, Marjory, differentiation of the yellow plant pigments from vitamin-A, A., i, 295, 484.

Stephenson, R. E., the effect of organic matter on soil reaction, A., i, 916. soil acidity and bacterial activity, A., i, 916.

Stepp, Wilhelm, detection of formic acid in human blood, A., i, 203.

Stepp, Wilhelm, and Wilhelm Engelhardt, the quantitative estimation of acetone and acetaldehyde in the same solution, A., ii, 69.

Stepp, Wilhelm, and Hermann Zumbusch, intermediate carbohydrate metabolism in man. II. Quantitative behaviour of formic acid in normal and pathological blood, A., i, 381.

Stern, Ernst, vegetable glues, A., i, 226. Stern, Rosa. See Friedrich Feigl.

Stettbacher, A., mercuric azide, A., ii, 48.

Steubing, Walter, the iodine molecule and the emission of its band spectrum, A., ii, 361.

temperature and band spectra, A., ii, 667.

Steudel, Hermann, a simple method of preparation of creatine from meat extract, A., i, 192.

Steudel, Hermann, and E. Peiser, yeastnucleic acid, A., i, 66.

a new method of cleavage of nucleic acids, A., i, 136.

Stevens, Henry Potter, sols and gels of vulcanised caoutchouc, A., i, 735.

Stevenson, Arnold. See George Armand Robert Kon.

Stevenson, $Helen\ C$. See $Walter\ H$. Eddy. Stewart, G. R. See D. R. Hoagland.

Stewart, (Miss) Jessie. See Samuel Smiles.

Stiegler, A. See Karl Höfler.

Stiegler, Adolf, general colloidal chemistry. II. Time change of colloidal stannic acid after peptisation with alkali hydroxide solution, A., ii, 577.

Stieglitz, Julius, Morris S. Kharasch, and Martin Hanke, preparation of 5.5'-mercuri-bis-3-nitro-4-hydroxy-phenylarsinic acid, A., i, 523.

Stieglitz, Julius. See also George Ross Robertson.

Stillman, Edgar. See J. Harold Austin. Stillmunkés, A. See Charles Rabaut.

Stobbe, Hans, and Paul Schmitt, photochemistry of alkyl iodides and iodine solutions, A., ii, 76.

Stock, Alfred, Fritz Henning, and Ernst Kuss, vapour tension tables for measurement of temperatures between + 25° and - 185°, A., ii, 432.

Stock, Alfred, and Karl Somieski, silicon hydrides. IX. Reactions with alkali metals, A., ii, 330.

silicon hydrides. X. Compounds containing nitrogen, A., ii, 399.

Stock, Alfred, and Friedrich Zeidler, boron trimethyl and boron triethyl, A., i, 328.

Stock, Heinrich. See Robert Schwarz.
Stoermer, Richard, and E. Laage,
natural and synthetic truxillic and
truxinic acids. III., A., i, 179.

the seventh acid of the truxillic acid series, neotruxinic acid. V., A., i, 182.

Stoermer, Richard, and F. Scholtz, the sixth acid of the truxillic acid series, 5-truxinic acid (zetruxinic acid). IV., A., i, 180.

Stoll, L. See Alfred Thiel.

Stollé, Robert, preparation of N-substituted oxindoles, A., i, 596.
Stollé, Robert, and E. Knebel, new

Stollé, Robert, and E. Knebel, new method for the preparation of coumarandiones, A., i, 578.

Stollenwerk, Wilhelm. See Wilhelm Biltz.

Stoltzenberg, Hugo, and Margarete Stoltzenberg-Bergius, melanin and humus. I. The formula of p-benzo-quinone; the thermal rearrangement in the quinone series; the physiological significance of quinone humus, A., i, 32.

Stoltzenberg-Bergius, Margarete. See Hugo Stoltzenberg.

Stoquer, influence of temperature on the absorbent properties of soils, A., i, 914.

Stosius, Karl, and Karl Wiesler, the position of the double bond in ricinoleic acid, A., i, 7.

oleic acid, A., i, 7.

Stransky, Emil, occurrence of chelidonic acid, A., i, 85.

Stransky, Emil. See also Er. Schiff.

Straub, Hermann, and Klothilde Meier, blood gas analyses. V. The influence of alkaline earths on hæmoglobin and cell colloids, A., i, 72. blood gas analyses. VII. The in-

blood gas analyses. VII. The influence of boron, aluminium, and lanthanum on hæmoglobin and the cell, A., i, 72.

blood gas analyses. VIII. The influence of some digitalis substances on the ion penetration in human erythrocytes, A., i, 72.

Straus, Fritz, and Leo Lemmel, Δ^1 -dihydronaphthalene. III. Modes of formation of Δ^1 -dihydronaphthalene, A., i, 170.

Straus, Fritz, and August Rohrbacker, [with Leo Lemmel], Δ¹-dihydronaphthalene. IV. Conversion of Δ¹-dihydronaphthalene into alicyclic substitution products of tetrahydronaphthalene, A., i, 171.

Strauss, Eduard, and Rudolf Grützner, protein chemistry. II. Iodoglobin, A., i, 200.

Strauss, Eduard. See also F. Blum.

Strauss, Frank A. See Ralph H. McKee.

Strecker, Wilhelm, and Karl Conradt, the separation of mercury from other elements by distillation from hydrochloric acid solution. A., ii, 64.

Strecker, Wilhelm, and Heinz Thienemann, the action of ozone on alkali metals, ammonia, and substitution products of ammonia, A., ii, 44.

Streel, (Mlle.) du Vivier de. See E. Fauré-Fremiet.

Strohmann, H., and S. Flintzer, rapid estimation of carbamide in urine, blood, and other physiological fluids, A., ii, 664.

Strong, Ralph K., the isotopism of mesothorium and radium and the separation of these elements from barium, A., ii, 294.

Strowd. W. H., the forms of nitrogen in soja bean nodules, A., i, 387. the estimation of nitrites and nitrates

in plant tissue, A., ii, 59.

Struck, Erich. See Karl W. Rosenmund.

Strufe, Karl. See Heinrich Biltz.
Stubbings, Wilfrid Victor. See James
Kenner.

Studinger, Josef. See Hans Kreis. Stuer, Bernhard Conrad. See Chemische

Fabrik Rhenania Akt. Ges.

Stuhlmann, Hans Caesar. See Gerhart Jander.

Stukart, P. See Aladar Skita. Subkova, S. See S. Kostychev. Suda, Keiji. See Sõjirõ Kawase

Suda, Keiji. See Séjirê Kawase.
Sudborough, John Joseph, and D. D.
Karvé, action of methyl and ethyl alcohols on esters of 2:6-dinitro- and 2:4:6-trinitro-benzoic acids, A., i, 666.

Sudborough, John Joseph, N. Picton, and D. D. Karvé, additive compounds of arylamines with nitro-derivatives of naphthalene, A., i, 557.

Sudborough, John Joseph. See also B. Dasannacharya, and D. D. Karvé.

Sugden, Samuel, on reduction by metals in acid solutions. I. The reduction of acid ferric sulphate solutions by zinc and magnesium, T., 233.

the determination of surface tension from the rise in capillary tubes, T.,

1483.

Sugii, Yoshio, preparation of 3:4-dihydroxyphenylalanine, A., i, 346.

Sumner, James B., a new reagent for the estimation of sugar in urine, A., ii, 526.

Sumner, James B. [with V. A. Graham], dinitrosalicylic acid; a reagent for the estimation of sugar in normal and diabetic urine, A., ii, 564.

Sunder, Charles, and Marcel Bader, anthraquinone and its derivatives as reductive catalysts, A., i, 676.

Sure, Barnett, amino-acids in nutrition.

III. Is proline a growth-limiting factor in the proteins of peas (Vicia sativa)? what nucleus in zein is responsible for supplementing these proteins? A., i, 526.

Suszka, J. See Karol Dziewoński.

Svanberg, Olof, the velocity of growth of lactic acid bacteria in different hydrogen-ion concentrations, A., i, 80.

the preparation of highly active saccharase (invertase) preparations. II. and IV., A., i, 202.

sensitiveness of saccharase towards ultra-violet light and towards oxidising agents. A., i. 628.

oxidising agents, A., i, 628.

Svanberg, Olof, and Hans von Euler, toxic action in enzymic processes. III. The influence of copper sulphate on the autolysis of the yeast cell, A., i, 81.

Svanberg, Olof. See also Hans von Euler, Oskar Klein, and Gustav Tammann.

Svedberg, Theodor. See Johs. Lindeman.
Swanson, Charles O., hydrocyanic acid in Sudan grass, A., i, 913.

Swanson, W. W. See Francis B. Kingsbury.

Swarts, Frédéric, experiments with ω -trifluorotoluene, A., i, 656.

catalytic hydrogenation of organic fluorine derivatives, A., i, 657.

Sweet, Joshua Edwin. See C. W. Miller.

Sweet, S. S. See Samuel Edward Sheppard.

Swensson, Torsten, photo-bromination of toluene and xylene, A., ii, 291. photoelectric investigations with salt

solutions. II. and III., A., ii, 483. Swientoslawski, Wojciech, modifications of the adjabatic calorimeter A. ii

of the adiabatic calorimeter, A., ii, 379.

new data in thermochemistry, A., ii, 535.

the ratio of the densities of liquid and vapour, A., ii, 535.

a new constant characterising the system vapour-liquid, A., ii, 535. necessity of bringing concordance into

the thermochemical data of organic compounds, A., ii, 679.

compounds, A., ii, 679.

Swientoslawski, Wojciech, and Helena i

Zofia Eżaszkowskie, divergence between adiabatic and ordinary [thermochemical] measurements, A., ii, 680.

Swoboda, Frederick K., a method for the estimation of vitamin in connexion with determinations of vitamin in glandular and other tissues, A., i, 76.
Szécsi, P. See László Zechmeister.

Szent-Györgyi, Albert von, protein reactions. II. The action of electrolytes on serum albumin, A., i, 65.

protein reactions. III. Cataphoresis experiments with micro-organisms, A., i, 290.

protein reactions. IV. The physical chemistry of agglutination, A., i, 290.

protein reactions. I. A microscopical cataphoresis method, A., ii, 14.

Szilagyi, Julius von, properties of potassium arseno-thiosulphate; structural formula of trithionic acid, A., ii, 199.

some alkali antimony thiosulphates, A., ii, 207.

T.

Tacke, Ida. See David Holde.
Taeger, Kurt. See Richard Meyer.

Takagi, Seisi, sesquiterpene groups. II. Machilol and atractylol, A., i, 732.

Takagi, Seisi. See also Yasuhiko Asahina.

Takahashi, Eiiji, proteins of the muscle of Haliotis gigantea, Gmelin, A., i, 832.

Takahashi, Katsumi, constitution of linolic acid, A., i, 303.

Takahashi, Yasuyo, metallographic investigation of the system bismuth sulphide-antimony sulphide, A., ii, 208.

Takegami, Shirō, equilibria of reciprocal salt pairs, sodium chloride, magnesium sulphate and sodium sulphate, magnesium chloride at 25°, A., ii, 30.

the octahydrate of magnesium sulphate, A., ii, 698.

phate, A., ii, 698.

Talbot, Fritz B. See Willey Denis.

Taliani, M., quantitative test of the thermal stability of glyceryl nitrate explosives, A., ii, 524.

Tamman, Gustav, the action of light on sparingly soluble oxides in solutions of silver salts, A., ii, 147.

significance of recrystallisation, A., ii, 172.

phenomena in the formation of space lattices composed of two different species of atoms, particularly in the formation of mixed crystals of silver and gold, A., ii, 173.

liberation of gas from cold-worked metals during recrystallisation, A., ii, 202.

exchange of ions on the surface of minerals, A., ii, 211.

periodic irregularities of physical properties in homologous series, A., ii, 430.

carbon formed by the action of mercury on carbon tetrachloride, tetrabromide, and tetraiodide, A., ii, 450.

450. the behaviour of carbon towards silicon, A., ii, 451.

the composition of entectics and the limiting members of mixed crystal series, A., ii, 494.

the chemical properties of alloys, A., ii, 647.

Tammann, Gustav, and Olof Svanberg, the quantitative action of enzymes, A., i, 68.

Tampier, Louis. See Charles Moureu. Tampke, H. See F. Krauss.

Tani, Munro. See Gregory Paul Baxter.
Tanret, Georges, the presence of quinic
acid in the leaves of some conifers, A.,
i, 295.

Tanret, Georges, the influence of ammonium molybdate on the rotatory power of some sugars, A., i, 498.

the influence of ammonium molybdate on the rotatory power of mannitol, A., i, 544.

an ammonium molybdoquinate, A., i, 674.

Tansley, L. Beaumont, spiral classification of the elements, A., ii,

Tartar, Herman V., and Waldo L. Semon, the reaction between copper and nitrogen peroxide, A., ii, 336.

Tashiro, Shiro, production of ammonia

in nerve, A., i, 635.

Tassilly, Eugène, H. Pénau, and E. Roux, the preparation of nickel carbonyl, A., ii, 699. Taucher, R. See Walther Dilthey.

Taverne, H. J., preparation of anhydrous tin tetrachloride, A., ii, 51.

Taylor, A. H. See E. B. Rosa.

Taylor, Guy B., estimation of nitrogen oxides in gases, A., ii, 128.

Taylor, Hugh Stott, and Robert Martin Burns, adsorption of gases by metallic catalysts, A., ii, 630.

Taylor, Hugh Stott, and George St. John Perrott, the thermochemical data of cadmium chloride and iodide, A., ii, 303.

Telfer, Stephen Veitch, the influence of free fatty acids in the intestinal contents on the excretion of calcium and phosphorus, A., i, 700.

Tempel, H. See Siegmund Reich. Tendick, F. H. See Roger Adams.

Teodossiu, (Mllc.) Virginie, action of ammonium citrate on alkaline-earth sulphates, A., i, 540.

separation and estimation of the alkaline earth metals, A., ii, 521.

Teodossiu, (Mlle.) Virginie. See also Constantin Kollo.

Terenin, A., the normal orbit of the electron in the atom of mercury, A., ii, 669.

Terres, Ernst, certain nitroamines of the anthraquinone series, A., i,

effect of oxygen on the limits of inflammability of inflammable gases and vapours, A., ii, 99.

Terres, Ernst, and Hans Weiser, compounds of ammonia and carbonic acid in equilibrium with their aqueous solutions, A., ii, 448.

Terroine, Emile F., and H. Barthélémy, composition of the egg of the brown frog (Rana fusca) at the time of laying, A., i, 906.

Terroine, Émile F., and René Wurmser, influence of temperature on the utilisation of dextrose in the development of Aspergillus niger, A., i,

Tertsch. Hermann, crystallographical observations on atomic structure, A., ii, 24.

Terwen, A. J. L., apparatus for the estimation of small quantities of urea, A., ii, 70.

Tesche, H. See Alfred Benrath.

Teschendorf, Werner, new formation of the diastatic ferment outside the living cell, A., i, 163.

Tetralin G. m. b. H., alin G.m.b.H., preparation of reduction products of nitrotetrahydronaphthalenes, A., i, 406.

preparation of polycyclic hydroaromatic hydrocarbons, A., i, 409.

preparation of derivatives of tetrahydro-β-naphthylamine, A., i, 558. preparation of ar-tetrahydronaphtha-

lenesulphonic acids, their chlorides and derivatives, A., i, 659.

Thaer. D. See Rud. Seeliger.

Thannhauser, Siegfried J., and Berta
Ottenstein, nuclein metabolism.
XII. The hydrolysis of thymusnucleic acid by means of picric acid; the composition of thymic acid, A., i, 521.

nuclein metabolism. XI. The action of human liver-extract on nucleotides (guanosine, adenosine, xantho-

sine), A., i, 526.

Thannhauser, Siegfried J., and P. Sachs, yeast-nucleic acid, A., i, 201. uclein metabolism. X. The deami-

nuclein metabolism. disation of triphosphonucleic acid, A., i, 201.

Thaulow, (Mlle.) Karin. See Einar Biilmann.

Theodorescu, G. P. See G. G. Longi-

Théodorides, Ph., the thermal variation of the coefficient of magnetisa-tion of some anhydrous chlorides and an oxide in the solid state, and the theory of magneton, A., ii,

Thevenon, L., reaction of "saccharin," A., ii, 69, 357.

Thiel, Alfred, and E. Schulte, binary equilibria with solid carbon dioxide, A., ii, 178.

Thiel, Alfred, and L. Stoll, a substitute for Thoulet's solution, A., ii,

Thiele, Max. See Alfred Schaarschmidt. Heinz. Thienemann, See WilhelmStrecker.

Thierfelder, Hans, and Erich Schemp, specific rotation of the active sodium salts of \(\gamma \)-hydroxyphenylbutyric acid and the [asymmetric] reduction of benzoylpropionic acid in the body, A., i, 511.

Thiéry, potassium zinc ferrocyanide as a precipitant for urines; its application to the separation and estimation of uric acid and xanthine bases, A., ii,

527.

Thies, W. See Karl von Auwers.

Thieulin, R., the urinary elimination of the hydrochloride of diethylaminoethyl p-aminobenzoate (novocaine, syncaïne, etc.), A., i, 206.

Thirring, Hans, force of cohesion of the

diamond, A., ii, 330.

Thivolle, L. See G. Fontès. Thomann, H. See P. Karrer.

Thomas, C. J. See John Mellanby.

Thomas, Ethel Mary. See (Mrs.) Ida Smedley MacLean.

Thomas, F. See Douglas Frank Twiss. Thomas, Pierre, the estimation of tryptophan in protein material, A., i, 64. the proteins of yeast, A., i, 292.

the colorimetric estimation of tyrosine and the phenolic number of pro-

teins, A., ii, 607.

Thomas, Richard, and Edward Thomas Williams, the catalytic oxidation of ferrous salts in acid solutions, T., 749.

Thomas, William, inorganic complex salts. I. Potassium ferrioxalate and potassium cobaltimalonate, T., 1140. Thomas, William. See also Alexander

Findlay.

Thompson, J. C., latent heat of varorisa-

tion, A., ii, 679.

specific heat of vapours; determination of specific heat of a vapour at constant pressure, Cp., A., ii, 679.

Thompson, Leonard, preparation of some

hydrazines, A., i, 133.

Thompson, Thomas G., and John H. Black, intersolubility of chloropicrin and water, A., i, 3.

Thompson, Thomas G., John H. Black, and G. T. Sohl, the intersolubility of BB'-dichlorodiethyl sulphide and ethyl alcohol, A., i, 390.

Thoms, Hermann, and W. Deckert, a new hydroxystearic acid from "hardened" castor oil, A., i, 219.

Thoms, Hermann, and L. Hess, preparation of arsenic trihydride of high percentage purity, and its estimation, A., ii, 110.

Thoms, Hermann, and R. Pietrulla, synthesis and constitution of meconic acid, A., i, 264.

Thoms, Hermann, and Kurt Ritsert, derivatives of anæsthesin [ethyl p-aminobenzoate], A., i, 343.

Thomson, G. P., the spectrum of hydrogen positive rays, A., 285.

application of anode rays to the investigation of isotopes, A., ii,

Thomson, (Sir) Joseph John, the struc-ture of the molecule and chemical combination, A., ii, 252.

Thomson, William, estimation of indigotin, A., ii, 471.

Thorne, Percy Cyril Lesley, the solubility of ethyl ether in solutions of sodium chloride, T., 262.

Thornton, William M., jun., and James E. Chapman, tervalent titanium. I. Volumetric estimation of iron by titanous salts, A., ii, 279.

Thorpe, Jocelyn Field. See Christopher Kelk Ingold, and Woodford Stanley

Gowan Plucknette Norris.

Thresh, John Clough, the so-called action

of water on lead, A., ii, 551.

Thro, W. C., and Marie Ehn, calcium

in the blood in diseases of the skin, A., i, 908.

Thrun, Walter E., and Perry Fox Trowbridge, new method for the estimation of histidine, A., ii, 225.

Thuringer, V., estimation of iodides in the presence of iodates, A., i, 214.

Thüringer, V. See also Stefan Minovici.

Thurber, F. H. See Charles Walter Porter.

Tian, A., a theory of slow hydrolysis of salts, A., ii, 439.

a cause of dispersion of the colloid in an important class of hydrosols, A., ii, 439.

the stability and the reversibility of the transformations of the hydrosols obtained by hydrolysis of salts, A., ii, 440.

Tiebe, E. See Julius Tröger.

Tiede, Erich, inorganic luminescence phenomena. III. Phosphorescence of boric acid, A., ii, 75.

Tiede, Erich, and Friedrich Büscher, inorganic luminescence phenomena. II. Luminescent boron nitride. (Balmain's aethogen) and the excitation of luminescence by flames, A., ii, 74.

Tiede, Erich, and W. Jenisch, the thermal decomposition of acetylene in contact with metallic catalysts, A., ii, 100.

Tiede, Erich, and Arthur Schleede, phosphorescence and fusion of sulphides of the second group, particularly zinc sulphide, A., ii, 263.

the cathodic reduction of dissolved elementary nitrogen, A., ii, 328.

Tietze, O. See Ludwig Claisen.

Tiffeneau, Jules, mercury di-n-butyl and some of its derivatives, A., i, 655.

Tiffeneau, Marc, and Et. Ardely, abromohexoylcarbamide and homologous straight chain bromoacyl deriv-

atives of carbamide, A., i, 775.

Tiffeneau, Marc, and E. Gannagé, cyclohexane compounds of mercury, A., i,

Tiffeneau, Marc, and Alex. Orékhoff, the pinacolic nature of transpositions in the a-phenyl-\$\beta\$-methylpropane-αβ-diol series, A., i, 243.

the hydrobenzoin, semihydrobenzoin, and semipinacolic transpositions; the dehydration of alkylhydroben-

zoins, A., i, 565.

semipinacolic and semihydrobenzoinic transpositions in the a-phenylβ-methylpropane-aβ-diol Action of dilute acids on the glycol and its oxide; elimination of HI from the corresponding iodohydrin, A., i, 788.

Tiffeneau, Marc. See also Alex. Orékhoff. Tilley, F. W., the germicidal value of some of the chlorine disinfectants, A., i, 151.

Tillmans, Josef, and Anna Bohrmann, estimation of the alkalinity and of phosphates in the ashes of foods, A., ii, 348.

Timénez-Diaz, C. See Leonor Michaelis. Timmermans, Jean, a paraffin hydro-carbon contained in commercial benzene, A., i, 490.

piezoelectric analysis. II. Investigation of systems of which the temperature of solidification can pass through

a maximum, A., ii, 239.

piezochemical analysis. III. Crystallisation under increased pressure and its relationship to the mutual solubility of liquids, A., ii, 239.

freezing points of organic substances.

III., A., ii, 430.

freezing points of organic substances. IV. New experimental determina-tions, A., ii, 430.

freezing points of organic substances.
V. The odd and even alternation and the lowest melting point in a homologous series, A., ii, 431.

Timmermans, Jean, and Th. J. F. Mattaar, freezing points of organic substances. VI. New experimental determinations, A., ii, 622

Tingle, Alfred, volumetric estimation of aluminium in its salts, A., ii, 522.

Tipper, George Howlett, pitchblende, monazite, etc., from Bengal, A., ii, 269.

Tisdale, W. B. See F. R. Jones.

Tisdall, Frederick F., estimation of the phenolic substances in urine, A., ii, 67.

Tisdall, Frederick F., and Benjamin Kramer, estimation of sodium, potassium, calcium, and magnesium, in urine, blood, and fæces, A., ii, 655.

Tisdall, Frederick F. See also Benjamin Kramer.

Titley, Alan Francis. See William

Henry Perkin, jun. Titus, E. Y. See W. R. Hainsworth.

Tizard, Henry Thomas, and Alfred Reginald Boeree, the volumetric estimation of mixtures of acids and of bases, and of polybasic acids or bases, T., 132.

Tizard, Henry Thomas, and A. G. Marshall, estimation of aromatic hydrocarbons in mixtures of hydrocarbons, A., ii, 280.

Tobin, Elise. See Roger Frederick Brunel.

Tochtermann, Hans. See Kurt Heinrich Mever.

Tolman, Richard C., statistical mechanics applied to chemical kinetics, A., ii, 99.

theory of unimolecular reactions, A., ii, 248.

principle of similitude and the entropy of polyatomic gases, A., ii,

Tolstoi, Edward. See Walter G. Karr. maschek, Rudolf, phosphorescent zinc sulphide, A., ii, 588. Tomaschek,

Tomita, Masaji, the behaviour of the residual nitrogen of egg-white and of yolk on incubation, A., i, 829.

behaviour of dextrose added to the white of eggs during incubation, A., i, 829.

the formation of d-lactic acid in the animal organism, A., i, 829.

the influence of the addition of dextrose and alanine to egg-white on the formation of d-lactic acid during

incubation, A., i, 830. the formation of sarcolactic acid in the animal organism; the formation of d-lactic acid by the autolysis of hen's eggs, A., i, 830.

Tomita, Masaji, chemical composition of the egg-shell of the silkworm moth, A., i, 830.

methylation in the animal organism. I. Methylation of pyridine in the organism of the rabbit, A., i, 834.

methylation in the animal organism. II. The site of the methylation of pyridine in the animal organism, A., i, 834.

Tomkinson, E., colour and molecular formula of water and ice. I., A., ii, 396.

metallic hydrides and the action of hydrogen on the metals. I., A., ii, 453.

Tommasi, Giuseppi, analysis of leucites and leucitic minerals, A., ii, 132.

tables giving alcoholic strength from the specific gravity. II. From 25% to 50% of ethyl alcohol by weight, A., ii, 136.

Tomoshige, Naojiro, metallographic investigation of the system bismuth-

selenium, A., ii, 207. Toms, Harold. See Arthur Fairbourne. Toni, G. de. See H. Labbé.

Toni, G. M. de., colloidal calcium phosphate, A., ii, 334. Tonnet, J. See M. Loeper.

Toporescu, Er., the carrying down of lime and magnesia by precipitates of chromic oxide, A., ii, 353.

Topp, Ernst. See Heinrich Biltz.

Tour, R. S., apparatus for gas analysis by absorption and titration, A., ii, 125. Tramm, Heinrich. See Alfred Coehn.

Trampler, A. See Paul Wenger.

Traube, Isidor, and Paul Klein, colloidal condition of sparingly soluble and slightly soluble substances in water and other solvents; experimental confirmation of Gibb's principle, A., ii, 683.

Traube, Wilhelm, and Emil Reubke, the equilibrium, hydrofluoric acidsulphuric acid-fluorosulphonic acid,

A., ii, 539. Traube, Wilhelm, and Walter Schulze, the highest oxides of calcium and barium, A., ii<u>,</u> 548.

Traubenberg, aubenberg, Heinrich Rausch von, direct determination of the range of α-rays in solids, A., ii, 148.

Trautz, Max, the significance of velocity constants from the point of view of the quantum theory, A., ii, 180.

Travers, a new process for the estimation of fluorine in the cold, A., ii,

a new method of estimating silica, A., ii, 710.

Treadwell, W. D., electrometric titration of hypochlorous acid, A., ii,

electrolytic estimation of gold and its separation from copper, palladium, and platinum, A., ii, 416.

Treadwell, W. D. [with Alfred Rheiner], reductions with zinc and cadmium in volumetric analysis, A., ii, 523.

Treadwell, W. D. See also August L. Bernoulli.

Trebler, H. See Leopold Ruzicka.

Tréhin, Robert, specific heats of some organic liquids, A., ii, 237.

Treichel, O. See W. König.

Trelles, RogelioA.See Federigo. Reichert.

Trendelenburg, Wilhelm, simple method of gas analysis for physiological purposes, A., ii, 460.

Triffitt, (Miss) Phyllis Mary. See Holland Crompton.

Tröger, Julius, and A. Berndt, the action of diazonium salts on benzeneand p-toluenesulphonyl derivatives of acetic acid, ethyl acetate, acetonitrile, and acetamide, A., i, 743.

Tröger, Julius, and K. Bönicke, angostura alkaloids, A., i, 121.

Tröger, Julius, and E. Tiebe, the volumetric estimation of the methoxyl group, A., ii, 135.

Troensegaard, N., the demonstration of pyrrole compounds in the proteins, A., i, 201.

Trowbridge, Perry Fox. See Walter E. Thrun.

True, Rodney H., the function of calcium in the nutrition of seedlings, A., i, 837.

Tschermak, Gustav, orthoclases containing barium, A., ii, 121.

composition of aluminous augites, A., ii, 121.

analysis of rumpfite, A., ii, 121.

chemical constitution of zeolites, A., ii, 703.

Tschirch, Alexander, odoriferous substances and the sense of smell, A., i, 755.

Tschitschibabin, Alexei E., the action of methyl iodide on 2- and 4-aminoquinolines, A., i, 451.

Tschitschibabin, Alexei E., R. A. Konowalowa, and A. A. Konowalowa, tautomerism of a-aminopyridine and its derivatives, A., i, 450.

Tsujimoto, Mitsumaru, a new method for the separation of the highly unsaturated fatty acids in fish oils, A., i,

Tsvetkova, E. See S. Kostychev.

Tubandt, Carl, electrical conductivity in solid crystallised compounds. 11. Transportation and wandering of ions in uniform solid electrolytes, A., ii,

426.

Tubandt, Carl, and Sophie Eggert, electrical conductivity in solid crystallised compounds. 1V. The electrical conductivity of solid silver sulphidesilver mixtures, A., ii, 480.

Tubandt, Carl, Sophie Eggert, and Gustav Schibbe, electrical conductivity in solid crystallised compounds. III. The electrical conductivity of silver sulphide and cuprous sulphide, A., ii, 480.

Tucker, Stanley Horwood. See William Henry Perkin, jun.

Türk, Walter, serecin and the estimation of its constituents, A., i, 137.

Turner, Eustace Ebenezer. See George Macdonald Bennett, and George Joseph Burrows.

Turner, W. D., and A. M. Howald, methylamines from methyl alcohol and ammonium chloride, A., i, 97.

Tutin, Frank, behaviour of pectin towards alkalis and pectase, A., i, 751.

Twiss, Douglas Frank, the discontinuity of vulcanisation in the presence of organic accelerators, A., i, 876.

Twiss, Douglas Frank, and F. Thomas, the relative activity of various allotropic forms of sulphur towards caoutchouc, A., i, 876.

Twitchell, E, precipitation of solid fatty acids with lead acetate in alcoholic

solution, A., ii, 662.

U.

Ugarte, Trifon, estimation of morphine in opium and certain of its preparations, A., ii, 225, 360.

estimation of caffeine in yerba mate, coffee, tea, kola nut, and guaraná, A., ii, 470.

Uhlig, Johannes, a diopside containing manganese from the Radautal near

Harzburg, A., ii, 121.
Ulich, L. H., and Roger Adams, the reaction between acid haloids and

aldehydes. III., A., i, 301. Ullmann, Fritz, preparation of 1:4-chloronitroanthraquinones, A., i, 424. Ullmann, Fritz, and Margarete Ettisch,

investigation of 2:3-dichloro-α-naph-

thaquinone, A., i, 269.

Ultée, A. J., amyrin and lupeol in the caoutchouc from Ficus vogelii, A., i, 420,

Unna, P. G., composition of horn and epidermis, A., i, 637.

Urbach, Franz, periodic system, atomic structure, and radioactivity, A., ii,

Urbain, Georges, the energetic foundations of the atomic theory, A., ii, 543.

Urk, H. W. van, the active constituents of Capsella bursa pastoris, A., i, 488. estimation of alcohols and phenols in ethereal oils by esterification with pyridine, A., ii, 660.

Ursum, Werner. See Carl Neuberg.

Uyeda, Yoshisuke, and Ebenezer Emmet Reid, a sulphide acid; butyl ether of thioglycollic acid [butylthiolacetic acid], A., i, 8.

Vaillant, Pierre, the variations with temperature of the [electrical] conductivity of calcium sulphide, A., ii,

Vallée, C. See M. Polonovski.

Vandenberghe, Henri. See E. Chrétien, Daniel Florentin, and J. Froidevaux. Vanossi, Reinaldo, estimation of dis-

solved oxygen in water, A., ii, 517. Varga, Georg, electrical properties and peptisation of colloids, A., ii, 371.

Vargolici, V. See Al. Ionescu.

Varićak, Svetozara, influence of some compounds on the viscosity of solutions of dextrose in water, A., ii, 382. Vary, (Mlle.) M. See Victor Auger.

Vaubel, [Johann] Wilhelm, dimethylglyoxime reactions of iron and cobalt, A., ii, 596.

Vavon, Gustave, the velocity of reaction in hydrogenations by platinum black, A., ii, 542.

Vavon, Gustave, and J. Detrie, the transformation of phenol into cyclo-

hexanol, A., i, 505.

Vecchiotti, Luigi, action of mercuric acetate on p-toluidine. II., A., i, 902. Veen, A. L. W. E. van der, aristochin

and optochin nitrates, A., i, 45. Vegard, L., rôle of water of crystallisa-

tion and the structure of alums, A., ii, 24.

the spectrum of hydrogen positive rays, A., ii, 285.

constitution of mixed crystals and the space filling of the atoms, A., ii,

explanation of Röntgen spectra and the constitution of the atom, A., ii, 674.

Veil, (Mlle.) S., allotropic varieties of oxides, A., ii, 423.

Veimarn. See Weimarn. Velich, V., volumetric estimation of tin with potassium bromate, A., ii, 658.

Venable, Francis P., and D. H. Jackson, hydrolysis of zirconyl chloride and sulphate at 0° and 20°, A., ii, 118.

Venkatesachar, B. See E. Parr Metcalfe.

Verein Chemischer Fabriken Mannheim, preparation of sulphur dioxide, A., ii, 196.

Vereinigte Chininfabriken Zimmer & Cie, preparation of hydrogenated cinchona alkaloids containing se-

lenium, A., i, 267. preparations of alcohols and aminoalcohols of the quinoline series, A.,

i, 355.

preparation of quinolyl ketones, A., i, 360.

Verhulst, J. H. See W. H. Peterson. Verkade, P. E., the action of microorganisms on organic compounds. II. The solubility of some organic acids in fatty oils, A., i, 290.

chemistry of aconitic acid. I. The preparation and properties of the hydroxy-anhydro-acid, A., i, 496. the velocity of hydration of anhy-

drides of dicarboxylic acids. I., A., ii, 318.

the velocity of hydration of anhydrides of dicarboxylic acids. II. Methylated succinic anhydrides, A., ii, 318.

Verne, J., the oxidation of carrotene from crustacea and the presence of a substance in the oxidation product which gives a cholesterol reaction, A., i, 77.

Vernon, Richard Henry, organic derivatives of tellurium. IV. Action of ammonia and the alkalis upon a-di-methyltelluronium di-iodide, T., 687.

obituary notice of, T., 2132.

Vernon, Richard Henry. See also (Miss) Isabel Ellie Knaggs, and Frederick George Mann.

Vèzes, Maurice, the composition of

French oil of turpentine, A., i, 427.

Viehoever, Arno, Joseph F. Clevenger, and Clare Olin Ewing, mustard seeds and substitutes. 1. Chinese colza, Brassica campestris chinoleifera, Viehoever, A., i, 212.

Vietense, Karl. See Ernst Sieburg. Vignon, Léo, water gas, A., i, 217. Ville, Lucien. See Marcel Delépine. Villegas, Lconor Sarlo, apparatus for ultra-filtration according to Gans, A., ii, 29.

Vines, H. W. C., coagulation of the blood. I. The rôle of calcium, A., i, 525.

coagulation of the blood. II. The clotting complex, A., i, 905.

See Gilbert Vining, Dudley Cloete. Thomas Morgan.

Violle, H., slimy lactic Streptococcus; a non-pathogenic species of lactic ferment, A., i, 386.

Virtanen, Artturi J., pinabietic acid, a definite resin acid. III. Constitution of pinabietic acid, A., i, 669.

Virtanen, Artturi J. See also Georg Wiegner.

Vischniac, Ch. See A. Goris.

Vixseboxse, H., the phenomena presented by allotropic organic substances in contact with a solvent, A., ii, 179. Vladesco, R. See Gabriel Bertrand.

Vlès, Fred., action of cyanogen derivatives on oxyhæmoglobin, A., i, 281.

Vlès, Fred. See also André Mayer. Vogel, Rudolf, dendritic crystallisation and its influence on the strength of metallic alloys, A., ii, 493.

tungsten-nickel alloys, A., ii, 512. formation of twins in the surface during layers of metals working, A., ii, 547.

Vogelenzang, E. H., the accuracy obtainable with varnished weights, A.,.ii, 39.

Vogt, Th. See Alexander Gutbier. Volk, H. See Fr. Boedecker.

Vollrath, Kurt. See Wilhelm Schneider.

Vollweiler, E. H. See Roger Adams. Volmer, M., high vacuum methods in

chemistry, A., ii, 396. Voorhis, C. C. van. See Arthur H. Compton, and Duncan MacRae.
Vorbrodt, W., utilisation of nitrogen

and of phosphorus in the mycelium of Aspergillus niger, A., i, 702.

Vorländer, Daniel, the crystalline-liquid properties of a-unsaturated ketones, A., i, 867.

Vortisch, Erhard, the system barium chloride-potassium chloride-sodium chloride, A., ii, 95.

mixed crystals (K, Na)Cl in ternary systems, A., ii, 96.

Vortisch, Erhard. See also Theodor Liebisch.

Vosburgh, Warren C., optical rotation of mixtures of sucrose, dextrose, and lævulose, A., ii, 233.

Voswinckel, Hugo. See C. A. Schleussner.

Votoček, Emil, a new form of galactose phenylmethylhydrazone, A., i, 544. the polyoses in rotted beetroots, A., i, 704.

Vournazos, Alexander Ch., the bismuthobromocyanides; new complex com-

pounds, A., i, 232.

Vürtheim, A., the composition of potassium platinichloride, A., ii, **6**1.

gravimetric estimation of potassium by the cobalt method, A., ii, 710.

Vuillaume, M. See Augustin Boutaric. Vyskocil, Ant., the speed of reaction of metallic magnesium in aqueous solutions, A., ii, 389.

Wacek, Anton von. See Ernst Philippi. Wacker, Alexander, use of dichloroethylene as solvent, A., i, 298.

Wacker, Leonhard, and K. F. Beck, the cholesterol content of human and cow's milk, A., i, 639.

Wadsworth, Raymond V., estimation of theobromine in cocoa and its products, A., ii, 225.

Waehlert, M., ternary aluminium alloys, A., ii, 508.

See Siegmund Reich. Waelle, C.

Wälti, A. See P. Karrer.

Wagenmann, K., a simple, exact, and rapid electrolytic estimation of cobalt in ammoniacal solution and its application to cobalt nitroso-\(\beta\)-naphthol, A., ii, 658.

Wagner, Adolf. See Hartwig Franzen. Wagner, H. See Heinrich Wieland.

Wagner, Mario Basto, thermodynamics of mixtures, IV., V., VI., VII., and VIII., A., ii, 162, 301, 375. theory of equations of condition. A., ii, 180.

Waitz, L. See P. Karrer.

Wald, Franz, determinations of the number of independent constituents of a system of substances, A., ii, 440.

Walden, Paul, degree of association of the molecules of binary salts in non-aqueous solutions, A., ii, 22.

connexion between thelimiting [electrical] conductivity λ_{∞} binary electrolytes in non-aqueous solvents and the viscosity η_{∞} of the latter: λ_{∞} . $\eta_{\infty} = \text{constant}$, A., ii,

ionic velocities in non-aqueous solu-

tions, A., ii, 170. diameter of ions in non-aqueous solutions, A., ii, 171.

Walden, Paul, the power of solution and ionisation of non-aqueous solvents toward binary salts, A., ii, 309.

the limiting value λ_{∞} of molecular conductivity in non-aqueous and aqueous solutions, A., ii, 423.

the relation between boiling point in the vacuum of the cathode light and critical temperature, A., ii, 433.

Waldschmidt-Leitz, Ernst. See Richard Willstätter.

Walker, Eric Everard, surface tensions of salts of the fatty acids and their mixtures, T., 1521.

Walker, Hilda. See Evelyn Ashley

Cooper.

Wallace, Thomas, and Alexander Fleck, some properties of fused sodium hydroxide, T., 1839.

Walle, H. van de, the ethylenic isomerism of chlorobromoethylene, A., i, 491.

aβ-dichloro-a-bromoethylene, A., i,

preparation of the stereoisomerides of αβ-dichloro-α-bromoethylene, A., i, 491.

aβ-dichloro-aβ-dibromoethylene, i, 491.

the chlorination of acetylene dibromide [aß-dibromoethylene] by antimony pentachloride, A., i, 492.

Walpuski, Hans. See Karl Freudenberg.

Walter, H. See Friedrich L. Hahn. Walton, C. F., jun., the preparation of rhamnose, A., i, 219.

Walz, gas-absorption flask, A., ii, 515. Wang, G., the metallic elements of the

ancient Chinese, A., ii, 39. the metallic compounds of the ancient Chinese, A., ii, 39.

Waran, H. P., apparatus for the prepara-tion of small quantities of pure nitrogen or carbon monoxide, A., ii,

Warburg, Otto, and Erwin Negelein, the reduction of nitric acid in green cells, A., i, 82.

the oxidation of cystine and other amino-acids in contact with blood

charcoal, A., i, 230.
Ward, Charles Frederick, the use of aluminium chloride and ferric chloride in the preparation of phenolphthalein, T., 850.

See also Ward, Charles Frederick. Samuel Coffey.

Wark, Ian William. See John Packer. Warren, C. H., crystalline characters of calcium carbide, A., ii, 549.

Wartenberg, H. von, and B. Sieg, the mechanism of some combustions, A., ii, 107.

See also W. Wartenberg, H. von. Mielenz.

Waser, Ernst, and M. Lewandowski, the I. Synthesis of phenylalanine series. l-3:4 dihydroxyphenylalanine, A., i, 788.

Washburn, Edward Wight, Frank F. Footitt, and Elmer N. Bunting, dissolved gases in glass, A., ii, 401.

Henry Stephens, Washington, chemistry of the earth's crust, A., ii, 119.

of gold-palladium alloy for use crucibles, A., ii, 194.

Washington, Henry Stephens, and Herbert Eugene Merwin, augite from

Vesuvius and Etna, A., ii, 212. Wasicky, Richard, the function of plant

glucosides, A., i, 295. Watanabe, K. Sec E. Yoshitomi.

Waterhouse, E. F. See Walter Raymond Schoeller.

Waterman, Henry C. See Carl Oscar Johns, and David Breese Jones.

Watson, Edwin Roy, and Sikhibhushan Dutt, dyes derived from phenanthraquinone, T., 1211.

Watson, Thomas, and Horace L. White, an improved apparatus for use in Folin and Wu's method for the estimation of urea in blood, A., ii, 358.

Watson, Thomas Leonard, lazulite from Graves Mountain, Georgia, A., ii,

Weber, H. C. P., reduction of chromium and other difficultly reducible metals, A., ii, 645.

Weber, H. H., the rôle of lactic acid in the production and resolution of muscle rigor, A., i, 635.

Weber, I. See Phabus A. Levene.

Weber, Sophus, critical constants of mercury, A., ii, 699.

Webster, (Miss) Dorothy. See Gilbert Thomas Morgan.

Webster, T. Arthur. See Benjamin Moore.

Wechselmann, Amely Camilla, lactacidogen content of frog's muscle, A., i,

Wedekind, Edgar [with P. Hausknecht], the magnetisability of the rare earths, A., ii, 237.

Wedekind, Edgar, and Daniel Schenk, action of organomagnesium compounds on arylsulphonic chlorides, A., i, 664.

Wehmer, Carl, preparation of fumaric acid, A., i, 845.

Weick, R. See Henri Gault.

Weigert, Fritz, optical properties of disperse systems. I. Colour changes through illumination, A., ii, 289.

Weigert, Fritz, and Hans Pohle, optical properties of disperse systems. Significance of the amicroscopic phase, A., ii, 290.

Weil, Arthur. See Emil Abderhalden, and Hans Handovsky.

Weil, E. See LcRoy McMaster.

Weimarn, Petr Petrovic von, method of dispersion of cellulose in concentrated aqueous solutions of neutral salts, A., i, 847.

swelling and dispersion of cellulose in concentrated aqueous solutions, A.,

i, 847.

a new world of chemical compounds, A., ii, 37.

homochemical compounds, A., ii, 324. flame as example of a stationary dispersoid system, A., ii, 539.

universality of any given state as a consequence of the fundamental law of energetics, A., ii, 545.

nberg, A. von, the benzene [formula] problem. V. The benzene Weinberg, ring in substitution products, A., i,

the benzene [formula] problem. IV. The naphthalene formula, A., i,

breaking of halogen bonds, A., ii, 165.

Weinberg, Abraham Albert, influence of the nervous system on the excretion of creatinine; experiments on nervous and mental patients, A., i, 639.

Weingand, R. See E. Blau.

Weinhagen, Albert B., the muscarine question. II. \(\psi\)-Muscarine (synthetic muscarine), A., i, 192. the diphenylamine reaction, A., ii, 346.

Weinland, Rudolf Friedrich, complex compounds of lead acetate, A., i, 535.

Weinland, Rudolf Friedrich, and Fr. W. Sierp, ferric-oxalic (malonic) acid compounds, A., i, 537.

Weiser, Hans. See Ernst Terres.
Weiser, Harry B., adsorption by precipitates. IV., A., ii, 625.

Weiser, Harry B., and Allen Garrison, oxidation and luminescence of phosphorus. I. and II., A., ii, 248, 637.

oxidation and luminescence III. Catalytic action phosphorus.

of vapours, A., ii, 695.

В., Weiser, Harry and **Edmund** Burrus Middleton, adsorption by precipitates. III., A., ii, 89.

Wislicenus.

Weiss, Friedrich. See Otto Fischer. Weiss, H., and P. Lafitte, the interpenetration of solids, A., ii, 551.

Weiss, Moriz, the urine pigments. II. Urochromogen, A., i, 136.

Weissenberger, Georg, structures in

disperse systems, A., ii, 578. See Wilhelm Weitemeyer, Herbert.

Weitz, Ernst, and Annemarie Nelken [with R. Ludwig], the free ammonium radicle. II. Benzylpyridinium, A., i, 804.

Weitz, Ernst, Adolf Roth, and Annemarie Nelken, the free ammonium radicle. I. Benzoylpyridinium, A., i, 804.

Weitz, Ernst, and Alfred Scheffer, action of alkaline hydrogen peroxide on unsaturated compounds, A., i, 868.

of transformations ketoxido-compounds; formation of β-ketonic aldehydes from αβ-unsaturated ketones, A., i, 869.

Weitzel, A., losses in chlorine in the estimation of chlorine in organic compounds by incineration and their prevention, A., ii, 591.

Weizmann, Charles, and David Alliston Legg, preparation of secondary butyl alcohol, A., i, 493.

manufacture of hydrocarbons [naphth-

enes], A., i, 712. Weller, R. See Karl von Auwers.

Weller, Richard, action of bromine on dihydroquinine and dihydrocupreine, A., i, 265.

Wells, P. V., turbidity standard of

water analysis, A., ii, 56.

Wells, Roger Clark, the salt error of cresol-red, A., ii, 55.

carbon dioxide in water of the Gulf of Mexico, A., ii, 260.

Welter, Georges. See Maurice Nicloux. Wenger, Paul, and Jules Morel, separation of silicon, tin, titanium, and zirconium by means of sodium carbonate, A., ii, 464.

Wenger, Paul, and A. Trampler, the estimation of total carbon and a new method of estimating graphitic carbon

in ferrous alloys, A., ii, 519.

Wenyon, C. M., action of "Bayer 205" on Trypanosoma equiperdum in experimentally intected mice, A., i, 908.

Wenzel, G. See Emil Heuser.

Werner, Alfred, Jeanne E. Schwyzer, and Walter Karrer, optically active cobalt salts with B-diketone residues in the complex, A., i, 224.

Werner, Alfred, and Alexander P. Smirnov, the stereochemistry of the ruthenium atom, A., i, 13.

Werner, Louis F., the methiodides of the condensation products of some cyclic aldehydes with quinaldine and a-picoline, and their possible value as indicators in acidimetry, A., i, 54.

an alkylene and some alkyl haloids of2-p-hydroxy-m-methoxystyryl-

quinoline, A., i, 443.

Werner, Max. See Friedrich Doerinckel. Wernicke, Raul, and Alfredo Sordelli, oligodynamy; activation of water by copper and its oxides, A., i, 758.

Wertheim, E. See Frank Burnett Dains.

Wesson, L. G., conversion of pinene compounds into a mixture of isobornyl ester and camphene, A., i, 796.

West, RalphWinton. See JohnValentine Backes.

Westbrook, Leon R. See Arthur Amos Noves.

Wester, D. H., the specific action of the urease of Canaralia, A., i, 469. microchemical examination of certain

orchids for alkaloids and tannin,

A., i, 486. Westphal, Wilhelm H., diameter of the atoms, A., ii, 394.

Wetmore, A. S., estimation of chlorides in blood, A., ii, 126.
Wetzel, W., formation of fluorite at the

ordinary temperature, A., ii., 554. Weyland, Paul. See Heinrich Wieland.

Wheeler, Alvin Sawyer, and Samuel C. Smith, ethers derived from the additive products of the nitro-anilines

and chloral, A., i, 411.
Wheeler, Richard Vernon. See John David Morgan.

Wheeler, T. Sherlock, an improvement in the nomen lature of organic chem-

istry, A., i, 297.
Wheeler, W. P., calcium metabolism, A., i, 474.

Wherry, Edgar Theodore, and William F. Foshag, classification of the sulphosalt minerals, A., ii, 120.

Wherry, Edgar Theodore. See also Joseph Alfred Ambler.

See Whincop, (Miss) Edith Muriel. George Macdonald Bennett.

Whinyates, Leonard. See Frederick William Atack.

Whipple, Bertha K., water-soluble vitamin-B in cabbage and onious, A., i, 85.

Whitby, A., and J. P. Beardwood, reactions of the xanthates, A., ii, 562. White, Edwin C., mercury derivatives

of phthaleins, A., i, 71.
White, Horace L. See Thomas Watson. White, Mollie G., and John W. Marden, the surface tension of certain soap solutions and their emulsifying power, A., ii, 88.

White, Woodford. See James Munsic Bell.

Whitehead, Hugh Robinson. See Pavitra Kumar Dutt.

Whitehorn, J. C., a system of blood II. Simplified method for analysis. the estimation of chlorides in blood or plasma, A., ii, 272.

Whiteley, J. H. See A. F. Hallimond. Whiteley, (Miss) Martha Annic. See John Valentine Backes.

Whiting, Albert L., and Warren R. Schoonover, nitrogen fixation by cowpeas and nodule bacteria, A., i, 208.

Whiting, E. T., tetrachlorophenol-phthalein, A., i, 31.

Whitley, Edward. See Benjamin Moore. Whitmore, Frank C., and Edmund Burrus Middleton, reaction of alkali haloids with mercury derivatives of phenol, A., i, 377.

tner, Thomas Cobb, jun., and Ebenezer Emmet Reid, a sulphide Whitner, alcohol, butylthiolethyl alcohol, A.,

i, 300. some derivatives of butyl mercaptan and their mercuric iodide compounds, A., i, 300.

Wichers, Edward, preparation of pure platinum, A., ii, 648.

Widmark, Erik Matteo Prochet, kinetics of the ketonic decomposition of acetoacetic acid, A., ii, 183.

Widmer, Fr. See P. Karrer.

Wiechmann, Ernst, the theory of magnesium narcosis, A., i, 79.

Wieckhorst, Hans. See Walther Borsche. Wieger, Bruno. See Jakob Meisenheimer.

Wiegner, Georg, colloid chemical aspects of the theory of indicators, A., ii,

Wiegner, Georg, J. Magasanik, and Artturi J. Virtanen, augmented adsorption, A., ii, 244.

Wieland, Heinrich, bile salts. Choloidanic acid, A., i, 113.

additive reactions with nitrous gases, A., i, 552.

the constitution of furoxans (glyoxime peroxides), A., i, 605.

the alkaloids of the lobelia plant. A., i, 802.

the mechanism of oxidative cesses. IV., A., i, 889. proWieland, Heinrich [with A. Bernheim, P. Böhm, and C. Reisenegger], nitrogen dioxide. I. Nitration with nitrogen dioxide, A., i, 778.

Wieland, Heinrich, and Ewald Blümich [with Fritz Reindel, and C. Reisenegger], the union of nitrogen trioxide and nitrogen peroxide with unsaturated compounds, A., i, 552.

Wieland, Heinrich, and Ewald Blümich [with H. Wagner], the addition of the higher oxides of nitrogen to the

triple carbon linking, A., i, 554.
Wieland, Heinrich, and Erich Boersch, bile acids. IX. The mechanism of the dehydration of the bile acids, A., i, 178.

Wieland, Heinrich, and Albert Kulen-kampff, bile salts. VI. Contributions to the decomposition of deoxybilianic acid, A., i, 112.

Wieland, Heinrich, and Franz Rahn [with Fritz Reindel], nitration, A., i, 782.

Wieland, Heinrich, and Fritz Reindel, terpinene "nitrosite," A., i, 553. Wieland, Heinrich, and Wilhelm Rhein-

heimer, cyclic arsenic compounds of the aromatic series, A., i, 371.

Wieland, Heinrich, and Paul Weyland. bile acids. VIII. Lithocholic acid, A., i, 178.

Wieland, Walter W. See Vernon K. Krieble.

Wiemann, B. See Walther Grimmer.

Wiener, Stella, the technique of the estimation of phosphoric acid; the application of Pregl's method in serum analysis, A., ii, 347.
Wiesler, Karl. See Karl Stosius.
Wietzel, Rudolf, stability relations of

the glass and crystal phases of silicon dioxide, A., ii, 504. Wijck, R. van. See Siegmund Reich.

Wijk, W. E. van, some amides of acids of the sugar group; relation between constitution and rotatory power, A., i,

318. Wilde, Paul René de, and Davey Bickford Smith & Cie, preparation of ethyl nitrite, A., i, 156.

Wildish, James E., dielectric constant selenium oxychloride, A., ii, 78.

Wilhelm, R. M., and J. L. Finkelstein, standardised method for the determination of solidification points, especially of naphthalene and paraffin, A., ii, 574.

Wilke-Dörfurt, Ernst, preparation of uranium compounds in the pure state, A., ii 205.

Wilkinson, John A., and I. A. Gibson, distillation of aqueous solutions of formaldehyde, A., i, 394.

Willard, Hobart Hurd, and W. Ellwood Cake, perchloric acid as a dehydrating agent in the estimation of silica, A., ii, 60.

iodometric estimation of aminonitrogen in organic substances, A.,

ii. 128.

Willard, Hobart Hurd, and Roy K. McAlpine, revision of the atomic weight of antimony; analysis of anti-

mony bromide. A., ii, 405.

Williams, Alexander Mitchell, forces in surface films. I. Theoretical con-II. Experimental obsiderations. servations and calculations. III. The charge on colloids, A., ii, 18.

the pressure variation of the equilibrium constant in dilute solution,

A., ii, 388.

Williams, E. J., chloroform solutions of hydrogen chloride, A., ii, 195.

Williams, Edward Thomas. See Richard Thomas.

Williams, John W. See Eli Kennerly Marshall, jun.

Williams, May. See John Addyman Gardner.

Williams, Robert Stenhouse. See Elfrida Constance Victoria Mattick.

Williamson, Erskine D. See Leason H. Adams.

Willstätter, Richard, peroxydases. II., A., i, 138.

preparation of perhydrophenylnaphthylmethane-o-carboxylic acid, A., i, 177.

Willstätter, Richard, and Max Bommer, preparation of formaldehyde from ethylene, A., i, 93.

complete synthesis of r-ecgonine and

of tropinone, A., i, 122.
Willstätter, Richard, and Adolf Pfannenstiel, succinyldiacetic ester, A., i, 91. Willstätter, Richard, and Fritz Racke, invertase, A., i, 823.

Willstätter, Richard, and Werner Steibelt, maltase. II. Estimation of maltase in yeast, A., ii, 72.

Willstätter, Richard, and Ernst Waldschmidt-Leitz, hydrogenation of aromatic compounds by the aid of plati-V. Hydrogenated phenylnaphthylmethanecarboxylic acids, A., i, 667.

hydrogenation of aromatic compounds by the help of platinum. IV. The dependence of catalytic hydrogenation on the presence of oxygen, A.,

ii, 185.

Wilmott, Δ . J., vegetable assimilation and respiration. XIV. Assimilation by submerged plants in dilute solutions of bicarbonates and of acids; an improved bubble-counting technique, A., i, 911.

Wilms, Irmg. See Walter Adolf Roth. Wilsey, R. B., crystal structure of

silver haloids, A., ii, 548.

Wilson, Carl Henry. See Gregory Paul Baxter.

Wilson, Ernest, measurement of low magnetic susceptibility by an instrument of new type, A., ii, 81.

Wilson, John Arthur, and Erwin J. Kern, estimation of tannin, A., ii, 719.

Wilson, J. Walter. See Philip H. Mitchell.

Wilson, Leonard Philip, obituary notice of, T., 571.

Wilson, Robert E., some new methods for the determination of the vapour pressure of salt hydrates, A., ii, 376.

Wilson, Robert E., W. Grenville Horsch, and Merril A. Youtz, the electrolytic production of sodium and potassium permanganates from ferromanganese, A., ii., 643.

Windaus, Adolf, and O. Dalmer, β -2furylethylamine and 8-tetrahydro-2-

furylethylamine, A., i, 117.

Windaus, Adolf, and F. Klänhardt, a method for the degradation of acids of

the glutaric series, A., i, 392.

Windaus, Adolf, and A. von Staden, cholesterol. XXXI. The differing behaviour of certain stereoisomeric derivatives of cholesterol, A., i, 507.
Windle, F. B. See Charles Thomas

Bennett.

Winkler, J. See Walther Dilthey.

Winkler, Ludwig Wilhelm, gravimetric analysis. XIV. Estimation of sulphuric acid in the presence of calcium, phosphoric acid, and chrom-

ium, A., ii, 57. quantitative analysis. XV. Estimation of barium as barium sulphate,

A., ii, 62.

water analysis. V. [Estimation of sulphuric acid], A., ii, 126.

estimation of nitric acid, A., ii, 274.

detection of arsenic, A., ii, 275. water analysis, A., ii, 413.

gravimetric analysis. XVII. Estimation of zinc, A., ii, 521.

XVIII. and gravimetric analysis. XIX. Determination of cadmium. I. and II., A., ii, 559, 656.

Winsvold, A. See Emil Heuser. Winternitz, Hans. See Wilhelm Steinkopf.

Wintgen, Robert, determination of the refraction of dissolved substances, particularly colloidal substances, A., ii, 137.

Wintgen, Robert, and Karl Krüger, the equilibrium, gelatin-hydrochloric acid, A., ii, 247.

Winther, Chr., two peculiar luminescence [phenomena], A., ii, 670.

Wintzell, Teodor. See Bror Holmberg. Wirth, Th., estimation of water in alcohols, A., ii, 651.

Wirth, Th. See also Adolf Grün.
Wislicenus, Hans, colloidal chemistry
of wood, its constituents and their formation, A., i, 84.

Wislicenus, Wilhelm, and Robert von Schrötter, isomerism of formylphenyl-VI. Alkylation of acetic esters. formylphenylacetic ester, A., i, 672.

Wislicenus, Wilhelm, and HerbertWeitemeyer, reduction of fluoreneglyoxylic ester, A., i, 511.

Witham, Ernest. See James Kenner.

Witt, J. C., action of sodium sulphide on ferric oxide, A., ii, 403.

Wittek, Herbert. See Heinrich Biltz. Wittek, Robert. See Robert Kremann.

Wittelsbach, Walter. See Kurt Hess. Wittka, Franz. See Adolf Grün.

Witzemann, Edgar J., disodium phosphate as a catalyst for the quantitative oxidation of dextrose to carbon dioxide with hydrogen peroxide, A., i, 160.

law of probability applied to the formation of fats from carbohydr-

ates, A., ii, 250.

Wöber, A., toxic action of compounds of arsenic, antimony, and fluorine on cultivated plants, A., i, 213.

volumetric estimation of polysulphidesulphur, A., ii, 274.

Wöhler, Lothar, and O. Balz, the determination of the valency scale of iron, cobalt, nickel, copper, manganese, tin, and tungsten by means of their water vapour equilibria, and of the dissociation pressure of the oxides of these metals, A., ii, 633.

Wöhlisch, Edgar, true molecular volume of liquid organic compounds and its dependence on the structure of the

molecule, A., ii, 536.

Wohl, Alfred, preparation of phthalic anhydride, A., i, 418.

Wohl, Alfred, and K. Blumrich, action of dilute mineral acids on cellulose, A., i, 164.

Wohl, Alfred, and K. Jaschinowski, derivatives of acetylenediacetal, A., i, 304.

Wohl, Alfred, and K. Jaschinowski, further experiments on the bromination of unsaturated compounds with N-bromoacetamide, A., i, 317.

Wolcott, Edson R., a new crystalline form of potassium chlorate, A., ii, 332.

Wolf, Charles George Lewis, influence of the reaction of media and of the presence of buffer salts on metabolism of bacteria, A., i, 208.

Wolf, Ludwig. See Alfred Heiduschka. Wolff (M/le.), furfurylidenecamphor and some of its derivatives, A., i, 514.

the molecular refraction and the specific rotatory power of furfurylidenecamphor and some of its derivatives, A., i, 514.

Wolff, E. See Carl Neuberg.

Wolff, H., and N. Singalowsky, analysis of gold, A., ii, 66.

Wolff, W. W. See Max Bergmann.

Wolfram, Artur, apparatus for filtration in anhydrous or indifferent gases, A., ii, 395.

Wolfram, Artur. See also Wilhelm Steinkopf.

Wolfram, Fritz. See Nikolaus Lyon. Wolski, P. See Wolfgang Ostwald.

Wolters, J. J.See Ernst Cohen.

Wolynski, Aaron. See Wilhelm Stein-

Wood, A. B., long-range particles from thorium active deposit, A., ii, 294.

Wood, Cyril Christian. See Henry Rondel Le Sueur.

Wood, RobertWilliams, hydrogen spectra from long vacuum tubes, A., ii, 665.

Woodman, Herbert Ernest, comparative investigation of the corresponding proteins of cow and ox serum, cow's colostrum, and cow's milk by the method of protein racemisation, A., i, 625.

Woodward, Elsic. See Charles Edwin Corfield.

Woodward, Harold E., and Carl Lucas Alsberg, detection of volatile alkylamines in the presence of ammonia and of volatile tertiary alkylamines in the presence of volatile primary and secondary alkylamines, A., ii, 358. Woodwell, M. N. See L. W. Smith.

Woog, Paul, the dimensions of the molecules of fatty oils and some phenomena of molecular solutions, A., ii,

Woollett, G. H., aristol, A., i, 340.

Woollett, G. H. See also William Hammett Hunter.

Wormall, Arthur. See Pavitra Kumar Dutt.

Worrall, David E., the addition of aromatic amines to bromonitrostyrene, A., i, 411.

Worrall, David E. See also Tenney L. Davis.

Woytacek, Carl, distillation apparatus for small quantities of liquid, A., ii,

Wrede, Fritz, synthesis of a tetrasaccharide containing sulphur, A., i, 12. the synthesis of sugars containing

sulphur and selenium, A., i, 161. Wren, Henry, and Edward Wright,

studies in the resolution of racemic acids by optically active alcohols. II. The resolution of atrolactinic and α-hydroxy-β-phenylpropionic acids by *l*-menthol, T., 798.

Wrenshall, Richard. See Arthur L. Dean.

Wright, C. H. See Otto Maass.

Wright, Edward. See Henry Wren.

Wright, Robert, and Robert Christie smith, the effect of temperature on platinum black and other finelydivided metals, T., 1683.

Wright, Sidney. See Alan Wilfrid Cranbrook Menzies.

Würschmidt, J., thermal analysis of binary and ternary alloys, A., ii, 646.

Wulff, Georg, nature of the cleavage of

crystals, A., ii, 91. Wunder, W. See Ferdinand Henrich.

Wurmser, René, and (Mme.) J. Duclaux, photo-synthesis in the algae Floridea, A., i, 211.

See also Émile F. Wurmser, René. Terroine.

Wuth, O., biological action of proteinogenous amines; a contribution to the question of the acetonitrile reaction, A., i, 835.

Wuyts, Henri, optical activation by catalysis of phenylmethylcarbinol, A., i, 506.

Wuyts, Henri, and R. Bailleux, the preparation of esters by distillation of a mixture of an organic acid and an alcohol, A., i, 494

Wyckoff, Ralph W. G., determination of the structure of crystals, A., ii,

application of the theory of space groups to the study of the structure of crystals, A., ii, 245.

the crystal structure of magnesium oxide, A., ii, 262. wave-length of X-rays, A., ii, 674.

crystal structure of alabandite (MnS), A., ii, 700.

Y.

Yamada, Nobuo. See Eiichi Yamazaki. Yamaguchi, Yohei, a method for the determination of the molecular weight requiring but a small quantity of the substance. II., A., i, 83.

Yamazaki, Eiichi, Nernst's heat theorem

and chemical constant, A., ii, 574. Yamazaki, Eiichi, and Nobuo Yamada, chemistry of diastase. I. Constitution of maltose from the point of view of the chemical dynamics of its hydrolysis, A., i, 647.

Yanagisawa, Hidekichi, Japanese bird-

lime, A., i, 760.

Yanagisawa, Hidekichi, and Masumi Kamio, estimation of ethyl acetoacetate, A., ii, 418.

Yanagisawa, Hidekichi, and Hajime Kondô, iodine as a catalyst in the preparation of coumarin, A., i, 682.

Yanek, A., coagulation of dispersoid solutions at the interfaces of phases; (method of separation into layers and method of shaking), A., ii, 538.

Yasui, Toyokichi, the precipitation of zinc with chromium, A., ii, 216.

Yeoman, Ernest Wickham, trithiocarbonates and perthiocarbonates, T., 38.

Yéramian, Vartkès, synthesis and dehydration of phenylethylpropylcarbinol [γ-phenylhexan-γ-ol], A., i, 727.

Yoder, Lester. See Arthur Wayland Dox.

Yoe, John H., anhydrous yellow ferric oxide, A., ii, 337.

Yoneyama, T., and J. Ban, methyl chloride, A., i, 3.

Yoshida, Usaburo, the regularity in the Stark effect on the spectral lines of hydrogen and helium, A., ii, 139.

Yoshimura, Kiyohisa, the nitrogenous compounds in the egg-plant (Solanum melongena, L.), A., i, 296.
Yoshitomi, E., and K. Watanabe, brom-

ural [a-bromoisovalerylcarbamide], A., i, 775.

Young, A. M. See Tenney L. Davis. Young, I. M. de. See G. M. McKellips, Young, John H. See Thomas Ewan.

Young, Stewart Woodford, and Neil Preston Moore, secondary sulphide ore enrichment; copper sulphides and hydrogen sulphide, A., ii, 120. sulphide ore enrichment; formation of chalcopyrite, A., ii, 120.

Young, William John, extraction of melanin from skin with dilute alkali,

A., i, 467.

Youngburg, Guy E., the removal of ammonia from urine preparatory to the determination of urea, A., ii, 358. Youtz, Merril A. See Robert E. Wilson.

Z.

Zaleski, A., and (Miss) A. A. Sachnovska, estimation of uric acid in blood by Folin's method, A., ii, 226.

Zambonini, Ferruccio, palmierite from Vesuvius, A., ii, 458.

Zanetti, Joaquin Enrique, and

Kandell, formation of anthracene from benzene and ethylene, A., i, 334. Zappner, R. See Friedrich Meyer.

Zawodsky, Othmar. See Robert Kremann.

Zechmeister, László, and P. Szécsi, an occurrence of fumaric acid and of inositol, A., i, 158.

Zechuisen, H. See Hendrik Zwaardemaker.

Zehmen, Heinz von, swelling phenomena with fibrous alumina, A., ii, 49.

Zehnder, Ludwig, the hydrogen atom, atomic ether, and Planck's quantum, A., ii, 191.

Zeidler, Friedrich. See Alfred Stock. Zeisel, S. See Josef Herzig.

Zeiss, Heinz. See Martin Mayer. Zeitschel, Otto. See Arnold Blumann.

Zellner, Gertrud. See Heinrich Biltz. Zellner, Julius, the latex of Lactarius vellereus, Fr., A., i, 212.

chemistry of the higher fungi. XIV. Lactarius rufus, Scopol., L. pallidus, Pers., and Polyporus hispidus, Fr., A., i, 212.

Zemplén, Géza, synthesis of fatty acid derivatives of the sugars, A., i, 498.

Zenghelis, Constantin D., detection of nitrogen in organic compounds, A., ii, 557.

a new reaction of ammonia, A., ii, 558.

Zenneck, Jonathan, demonstration of the after glow of active nitrogen by means of an electrodeless ring current,

A., ii, 258. Zerbini, G. See Riccardo Ciusa.

Zetzsche, Fritz. See Karl W. Rosenmund.

Ziegler, K., preparation of anhydrous hydro yanic acid, A., i, 165.

the action of unimolecular formaldehyde on Grignard's compounds, A., i, 394.

Ziegler, K. See also Karl von Auwers. Zijp, C. van, sodium salicylate as reagent for the microchemical detection of aluminium, iron, chromium, and manganese, A., ii, 463.

Zilva, Sylvester Solomon, the action of ozone on vitamin-A in fats, A., i, 475.

Zilva, Sylvester Solomon, and Masataro Miura, the differential dialysis of the antineuritic and the antiscorbutic factors, A., i, 702.

Zilva, Sylvester Solomon. See also Arthur Harden.

Zimmermann, Walther, sensitive test for the hydrides of arsenic, antimony, and phosphorus by means of gold chloride, A., i, 276.

Zinke, Alois, and Johanna Dzrimal, constituents of resins. VII. Lubanyl benzoate from Siamese benzoin. I., A., i, 187.

Zinke, Alois, Alfred Friedrich, and Alexander Rollett, constituents of resins. VI. Amyrins from the elemi resin of Manila: I. Separation of the amyrins, A., i, 39.

Zinke, Alois. See also Roland Scholl. Zinn, John B. See Arthur J. Hopkins. Zoller, Harper F., the interaction of tin and phenol, A., i, 238.

phthalate buffers-some incompatibilities, A., ii, 387.

viscosity of casein solutions. A., i, 625. Zoller, Harper F., and William Mansfield Clark, the production of volatile fatty acids by bacteria of the dysentery

group, A., i, 385. Zucker, T. F. See L. von Meysenbug. Zuckerkandl, Fritz, and Martha Sinai, action of sulphur monochloride on tertiary aromatic arsines; constitution of sulphur monochloride, A., i, 901.

Zuckmayer, F., elimination of silicic acid in the urine after administration of certain silicic acid preparations, A., i, 288.

Zumbusch, Hermann. See Wilhelm Stepp.

Zumstein, R. V. See John Cunningham McLennan.

Zwaardemaker, Hendrik, and H. Zeehuisen, spray-electricity of solutions of electrolytes, A., ii, 151.

Zwicknagl, K., electrically heated arsenic reduction tube, A., ii, 412.

Anonymous, use of "fornitral" for the detection and estimation of nitric acid, A., ii, 558.